Observations

INTRODUCTORY TO CLINICAL LECTURES ON THE

DISEASES OF WOMEN.

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PART II.

WE have discussed the meaning of Specialism in medicine. We have seen that an absolute specialism, in the sense in which it is largely current, cannot be; and we concluded that a rational specialism can only be built on the basis that the several parts of the body are indissolubly interdependent; that each part is necessary to make up the whole—that is, a whole body, with one physiology and one pathology.

Now I want to pursue this subject, seeking to evolve the pathology of the female pelvic organs out of general pathology, and, in turn, to illustrate general pathology by the rational study of the particular pathology of the female pelvic organs.

It is not my business to make specialists or to encourage specialism. I understand my duty to be to lead you through the theoretical and clinical study of that branch of medicine the teaching of which is entrusted to me, to a better comprehension of medicine as a whole. Those who are destined for general practice will feel the advantage of this method at every stage; and those who devote themselves more especially to pure medicine or surgery may be led to take a broader view of their field of work, and to escape not a few of the pitfalls that entrap those who fail to take a full survey of the country through which they are travelling.

Addressing ourselves, then, to our task, let us first say a word or two about the means we have at our disposal in the investigation, that is about the organon of research. Although almost all the ordinary instruments and appliances which are useful in the investigation of the condition of other parts of the body are also brought to bear in the investigation of the condition of the pelvic organs, there is one instrument which here is of paramount utility: the index finger is our most universal guide. Now every man has an index, but that is not enough; he must know how to use it. An Egyptian monarch asked his victorious general to show him his sword; the general reminded the king that the sword was like any other sword, that the virtue lay in the arm that wielded it. So it is with the physician's finger. It must possess the *tactus eruditus*. Let us inquire for a moment how this is acquired. It means nothing less than the scientific culture of the mind, the acquisition of knowledge which alone can enable us to interpret rightly the sensations conveyed from the finger-tip to the centre of intelligence. In life you find very much what you put into it. Some people, even many, feel disappointed at the sight of Niagara, of Venice, of Rome. This is the natural result of want of cultivation, of ignorance. Niagara speaks with a voice deeper than the thunder of its precipitous waters to one who has studied the laws of the universe and sees in the mighty cataract one of the great forces of Nature at work. So the perishing stones of Venice and of Rome tell us the history of humanity from the birth of civilisation in all the phases of its progress through the ages, attesting, by the characters graven upon them, the thoughts, the deeds of the men who have gone before, bequeathing to us the heritage of imperishable genius.

Let me give a particular illustration. A tense piano-string will give back its own note when struck with the key or by the voice. If you sing a note which is not that of the string, the voice goes past and is lost; there is no response. So if you explore by finger, by stethoscope, by sound, or other diagnostic instrument, unless the understanding mind travel along it, you get nothing in return but a dull, confused, unintelligible answer. In every sensation there is, besides the actual message sent to the brain, something that we imagine and add to the message; that is, there is a part which comes from the external world, and a part which is supplied by the mind. Without going into metaphysical subtleties, we may state that the direct sensation is one thing, the interpretation of it is another thing. We may carry the illustration further, and say that if you bring to the inquiry a mind misinformed, prejudiced, you will be apt to get an answer false and misleading; so true is it that you find what you bring. But you may ask—How, then, are we to learn? How are we to gain the knowledge that is to bring the right answer? By starting with good sound anatomical knowledge of the natural features of the parts explored, and by losing no opportunity of testing and correcting the sensations and impressions acquired through one sense by the experience of other senses. The first condition is fulfilled by careful dissection and the study of good preparations and drawings, so as to hang up in the cabinet of the mind correct standard pictures of the natural state of the parts under investigation; the second is fulfilled by varying the mode of examining, by clinical cross-examination, and by cautious reference to the interpretations suggested by others who are more skilled than yourself. This last method—reference to the judgment of others—must, however, be adopted with extreme jealousy, lest you fall into the dangerous error of servile subjection to the words of the master. You must learn to see with your own eyes, to judge with your own judgment. In this way alone can you cultivate the true scientific spirit, and qualify yourselves not only to improve your own knowledge, but to add to the general store.

Any person, howsoever ill-informed, may feel the uterus by vaginal examination; but he may not even know that he touches it. It is even told that an advanced student declared that he felt the hymen whilst his finger was in reality gripped by the sphincter ani; and I have been told that an advanced practitioner—a graduate in honours—introduced a pessary up the rectum instead of the vagina. One a little better informed may know he feels the uterus, at least a small part of it, and yet be utterly at fault to determine its position or its other physical qualities. One with still more knowledge may make out its relations of size, solidity, relations, and other points with considerable precision, and then, bringing to bear his theoretical and scientific skill, he may elaborate out of these ascertained conditions what is called a diagnosis of the pathology of the organ he has touched. You see what a small part of all this process the mere physical examination really is. You may, from this reflexion, form an idea of the wide range of study you must cultivate in order to arrive at just clinical conclusions.

You will draw the distinction between scientific and technical or practical skill, and you will not forget that all rational and safe technical skill springs out of scientific skill. Specialism, in the sense in which some understand it, and in the way in which many would restrict it, is simply technical—that is, the practical application of what is known to a limited area of medicine. It supposes that the simple duty of the specialist is to detect the departures that occur from the health-standard in the limited area assigned to him, and to do his best to work upon these departures to bring back the health-standard of that limited area, without troubling his head about the complicating correlative departures from the health-standard of other parts, and without concern for the changes he may himself cause in other parts of the body, which are the territories of other specialists. Hard terms, so hard, fortunately, that they cannot be enforced. It is scarcely possible to degrade an intelligent man to the position of a mere empiric—a creature without brain or conscience. It is very true that a great part of our general therapeutical practice is empirical; but a great part of gynæcological practice is surgical. I dare not say there is no such thing as empirical surgery, but it is surely less empirical than medicine. Every operation presupposes the recognition of a lesion, and a rational method of treatment. Medical treatment is too commonly directed to the control of the more prominent symptoms, and in his therapeutics the physician is too often limited to the use of agents whose virtue are only known to him empirically.

Forgive me if I seem to diverge for a moment to make a general fundamental observation. The late Professor Clifford thus expressed the abstract principles which govern the growth of a living being:—"The processes which result in development are made up of *differentiation* and *integration*: differentiation means the making things to be different; integration means the binding them together into a

whole. These are applied to the parts of the organism, the organism and surrounding nature, the organism and other organisms." Integration of parts means the connected play of them, so that one being affected, the rest are affected.

Applying this, we may say that Anatomy differentiates, Physiology reintegrates. Anatomy is analysis, Physiology is the synthesis that endows with life, and which, therefore, explains Pathology.

But the application to women goes further. The integration of man with surrounding nature is more essential to the understanding of his physiology and pathology than in the case of woman. To the woman the integration with man and with offspring assumes predominant importance. Man's ambition and daily work is the contest with the surrounding world, physical and moral; the ambition and the work of woman, more restricted, is the study and conquest of man. This relation governs her being, and is the secret of a great part of her physiology and pathology.

After this exordium, tedious it may be, but I venture to think not without useful application, let us compress into as small a space as possible what it is essential to grave upon the mind of the anatomy of the pelvic organs of woman. It lies outside my province to describe the abstract or pure anatomy of these parts. So much knowledge of this subject as may be learned in the dissecting room, in anatomical lectures and books, I must presuppose you to possess. But looking to the end directly in view, we cannot omit a careful study of applied anatomy in its relation to pathology.

We call to mind, in the first place, that in the pelvis we find all the tissues of the body represented, varying of course in their characters according to the constitution of the organs constructed out of them, and the functions which these organs are called upon to perform. We note that they are linked to the neighbouring organs by continuity of tissue. Thus, although the pelvic structures are as a whole shut off into a distinct region by the lower reflections of the peritoneum, this membrane which binds down the bladder, uterus, ovaries, and rectum, pursues its course over the intestines and abdominal walls. That is, there is continuity of the *serous membrane element* of the pelvic organs with the serous membrane of the abdominal organs. We shall trace by and by important pathological histories from this continuity, its enormous growth under pregnancy, and other enlargements of the uterus and ovaries. Then we find *muscular tissue* interspersed in various proportions with *fibrous tissue* in the uterus itself, in the broad ligaments, even in the ovaries, in the vagina, in the rectum, and in the form of distinct muscles in the floor of the pelvis and the vulva. There is a thin sheet of muscular tissue passing off from the surface of the uterus, and expanding in the broad ligaments, and also bundles of muscular fibres running along, as Rainey has shown (here are his drawings), the round ligaments, and losing themselves in the inguinal regions. This spreading sheet, or platysma myoides of the broad ligament, as we might call it, and these fibres in the round ligament, maintain a continuity of structure with the body of the uterus and its appendages. This continuity implies two things, if not more: first, these continuous muscles exert, by their contractile action, a distinct influence upon the position and relations of the uterus—an influence in health, physiological, concerned in the erection of the organ, and controlling its natural and constant changes of position, a function very much lost sight of in the treatment of uterine displacements; an influence, pathological perhaps in certain morbid conditions. Their action may be detected in early abortions, especially when they seem to pull up the uterus by its lower segment, counteracting to some extent the down-driving force of the abdomen, and expanding the roof of the vagina, forming a cavity, in a way that is almost characteristic.

In the body of the uterus muscular tissue predominates; in the cervix there is a larger proportion of fibrous tissue. In the vagina there is a new element introduced in order to meet the peculiar functions of this canal. It must have an enormous capacity of distension for the purposes of labour; it must have equal power of contraction to restore the parts to the ordinary condition. Muscle alone would be insufficient. Elastic tissue supplies the want. Hence in the vaginal wall we find a combination of this with fibrous tissue.

Then we come to the *mucous membrane element*. This, like mucous membranes elsewhere, presents special features in accordance with the special functions of the organs which they help to constitute. And as in the intestinal canal, for instance, its features vary for the same reason in different parts of its tract. These variations, you will remember, are chiefly marked by the different structure of the glands which form the main characteristics of mucous membranes everywhere. The uses and diseases of the utero-vaginal glandular system we shall endeavour to trace hereafter. I will now call to mind the familiar apparent anomaly that the utero-vaginal tract not only has an external outlet like all mucous membranes, but it has a special outlet into the abdominal peritoneum, presenting the singular condition of continuity between a mucous and a serous cavity. There is a vast field of pathology arising out of this continuity. We know that the main office subserved by this continuity is to keep open a road for the carriage of the ovum from the ovary to the Fallopian tube into the cavity of the uterus. But this road is sometimes blocked or turned from its proper uses, and is made to carry fluids in the wrong direction from the uterus and tubes into the peritoneal cavity; and then serious troubles result. It would occupy several lectures to treat of their history with adequate fulness. I will only stop now to observe that many of the worst cases of puerperal peritonitis arise from the overflow or escape of septic matter from the uterus by this route; that many cases of pelvic hæmatocele arise in like manner from the back-flow of blood from the uterus from obstructed menstruation and other conditions. You will thus see in this continuity another link which binds the pathology of the uterus to general pathology.[1]

Books have been written upon what is called pelvic cellulitis, and much discussion has been held as to whether this disease is a real thing, whether, in short, pelvic peritonitis has not been mistaken for it. For the present it is enough to state that as cellulitis is know elsewhere, so, *à priori*, we may infer that the connective tissue of the pelvis, exposed as it is in a high degree to causes capable of provoking inflammation, is not exempt, but falls, like other tissues, under the common pathological laws.

The *bloodvessels and lymphatics* serving the pelvic region present several peculiarities adapted to the physiological conditions of the organs. The arteries proceeding from the hypogastric and utero-ovarian arteries are remarkable for their free anastomoses, so that they really form, for the uterus especially, a kind of arterial network rather than distinct vessels. One effect of this arrangement is that the uterus is permeated by an arterial system every part of which communicates so freely with the rest that tapping it at any point may draw blood from the whole organ and its neighbourhood. This offers one explanation of the influence we can exert upon the body of the uterus by scarification of the vaginal portion. This disposition of the arteries is, no doubt, peculiarly fitted to meet the wonderfully rapid nutritive changes which attend the development of the uterus under pregnancy.

The *veins* offer corresponding features to those of the arteries. Everywhere they maintain the freest intercom-

[1] The forces that cause this overflow from the uterus through the tubes demand careful study. The most efficient one, long ago pointed out, is the active contraction of the uterus. Discussing the cases of death following intra-uterine injections in the first edition of the Clinical History of the Diseases of Women, 1873, I made the following observations: "It is not enough to know that patients occasionally die after injections are thrown into the uterine cavity; we want to know why they die." Referring to experiments by injection in the dead body, I say: "I will not relate or analyse these experiments, because they appear to me to be of little practical value. The conditions of the dead and of the living tissues are essentially different. For example, in the dead body there is no muscular contractility, no irritability under stimulus, no response of the nervous centres to peripheral injury; yet these are conditions which come into play when injections are thrown into the living uterus. .... It is certain that in some of the cases where fluid injected into the living uterus ran along the tubes the accident could not be accounted for by the very small amount of injecting force employed. Another power, therefore, must have been in action, and this could be no other than that exerted by the uterus itself contracting spasmodically upon the irritating fluid thrown into it. This force the lower or cervical orifice of the uterus, being closed, would pump the fluid onwards into the tubes." These passages are also found in the second edition, 1878, and the theory they express is illustrated in other parts of the work, and in several antecedent publications. It is, therefore, not without surprise, considering the known industry and erudition of German authors, that I find Dr. L. Bandl, in an elaborate memoir *(Die Krankheiten der Tuben, &c., 1879)* has the following passage: "An important circumstance in injection, or still more in the dropping of fluid into the uterine cavity, as in every form of intra-uterine medication, appears to us to be to watch the contraction of the organ. In a strange manner this circumstance has not yet been brought forward by anyone. .... The resistance at the lower parts of the uterus may, during its contraction, be greater than at the tubal openings, and thus fluid may be passed into them, and cause the worst accidents." I, of course, acquit Dr. Bandl of having read my book, since it is not mentioned in his "Literatur."

munication, and form large plexuses capable of the greatest variations as to the quantity of blood contained in them. Those in the uterus, according to Rouget, constitute a true *corpus spongiosum*. Both arteries and veins seem to depend more upon the muscular contraction and elasticity of the tissues in which they partly run for the regulation of the current in them than upon any active property in their own coats. Hence hyperæmia, congestion, and hæmorrhage are so often associated with defective muscular tone. Hence, also, the singular proclivity of the uterine substance to deviations from the healthy standard of nutrition. Hence, again, the remarkable readiness with which poisonous material is taken up and carried from the uterus into the general circulation. The veins then, like the connective tissue, constitute another toxicode—a word which appears to be wanted. I should call the connective tissue a *toxicode*. We know by multitudes of experiments on the lower animals, by the now familiar therapeutical experiment of subcutaneous injection of medicinal and nutritive fluids, and by daily clinical observation, how active is absorption from the cellular tissue.

We shall see some striking examples of this pathological process as we proceed. Closely allied to the bloodvessels we find the *lymphatic vessels and glands*. The lymphatics constitute another toxicode. The evidence of their full action may be seen in post-mortem examinations of some cases of puerperal metritis, in what used to be called lymphangitis. If we consider the frequency with which the vaginal and uterine mucous membrane, the muscular wall of the uterus, and the periuterine connective tissue are exposed to empoisonment, we might well wonder that the system is not more often infected. It is one of the strangest and most interesting problems in the history of syphilis that, women not seldom escape constitutional infection from the immediate contamination, but become tainted through the embryo in the womb. We see in the lymphatic glands one barrier, often effective, against the invasion of the centres; but there are probably others. These will come under discussion at a later period of our inquiries. We can only now take a very general and cursory glance at an extensive subject, reserving to future opportunities the task of more minute inspection.

The *nerves* rank second only to the bloodvessels in importance as links between the ovario-uterine system and the system at large. Often, indeed, we might be tempted to assign to them the first place. But, indeed, their reciprocal and joint action is so indissoluble that we cannot conceive of either acting without the other. All the different kinds of nerve are represented. All maintain the freest communication with the great nerve-centres.

We may look at the pelvic organs as a whole from the abstract anatomical or differential point of view. But we cannot help looking at the component tissues from the integral point of view. The tissues, connective, vascular, lymphatic, nervous, form the links that bind the pelvic organs in physiological and pathological relation with the other organs of the body. These tissues take and give the elements of nutrition, of disorder, of poison; they reveal the work of those subtle diatheses mysteriously inherited or acquired, which play so important a part in general pathology, and nowhere a more important part than in the pathology of the ovaries and uterus.

There are two methods before us of pursuing our object. One, perhaps the more practical, is that adopted in the "Clinical History of the Diseases of Women." It consists in first seizing the symptoms, subjective and objective, as they present themselves in practice; then, by the light of acquired general knowledge and reflexion upon the features of the particular case, determining the significance of these symptoms, thus reasoning out pathology, diagnosis, and treatment. The other, perhaps the more philosophical, is to take each component tissue separately, to trace its pathology throughout, from its abstract expression, through symptoms and progress, to its termination. This is the method that I now propose to follow more or less closely. To follow either the one or the other rigorously would be impossible. In pursuance of this plan, I propose to begin with the pathology of the utero-vaginal mucous membrane.

VACCINATION GRANTS. — Mr. D. Protheroe Saer, No. 1 district of the Pembroke Union, has received a Government gratuity for efficient vaccination in his district. Also, Mr. W. S. Simpson, of the Pontefract Union, £11 15*s*.

Clinical Lecture
ON
A CASE OF TYPHUS FEVER.[1]

Delivered at the Middlesex Hospital, Jan. 9th, 1880,

BY SIDNEY COUPLAND, M.D.,
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GENTLEMEN,—I desire to-day to occupy our time with a study of a case of fever,—not that it has exhibited in its course any unusual or striking phenomena, but because it is of a class now rarely seen within our wards, and because it affords scope for many considerations, especially those dealing with diagnosis.

Daniel O'L——, sixteen years of age, a coal-hawker, was admitted into Founder ward on Dec. 18th, 1879. He is a fair specimen of a tolerably intelligent Irish lad. Dark-haired and pretty well nourished, he was, when admitted, begrimed with dirt from the dust of his occupation. He appeared prostrate and depressed; his lips were covered with sordes; his tongue was dry, brown, glazed, and fissured; his eyes were injected and suffused. In a word, he seemed very ill. When questioned, he said that he had pain in his fore-head, back, and belly; and there was undoubted tenderness over the lower dorsal spine, and also on the flexor surface of both knees, but no evidence of inflammation at or around these parts. As the bedclothes were raised, a distinctly musty odour could be perceived to emanate from his body, but at the time this was attributed to his dirty condition, although it should be said that before being seen he had had a warm bath. The skin felt dry and hot. The axillary temperature (after the bath) was 102·2° F. The skin was everywhere of a dusky-brownish colour, somewhat mottled, and scattered over the trunk and extremities were numerous vibices, which might well have been due to the bites of vermin, only close scrutiny failed to detect within them the characteristic central puncture of ecchymosis due to such a cause. Further, he was suffering from general bronchitis of moderate intensity, sonorous and sibilant rhonchi being audible over the whole chest, especially over the right front; whilst moist subcrepitant râles occurred scantily at the posterior bases, where the pulmonary resonance (elsewhere good) was notably impaired. The respiration rate was hardly explicable on mere bronchitis alone,—it was 50 per minute, and bore a ratio to the pulse-rate of 1 to 2, the latter being 108 per minute. The first cardiac sound was very feeble, occasionally reduplicate; but there was no murmur. The hepatic dulness was normal. The splenic dulness was increased, the lower border of the organ being also distinctly felt beneath the ribs. The abdomen was not distended, nor unduly tender in any part. His bowels had been constipated.

Pyrexia, prostration, pulmonary congestion and bronchitis, a mottled and petechial eruption of doubtful character, cardiac feebleness, and splenic enlargement, these were then the chief facts gleaned on the first examination of the patient. Naturally we turn to the history of his illness for further light; for we had to learn when his illness came on, under what conditions, and in what manner. I will give these historical data in their entirety. They were not all known to us at the time. Some of them did not come out till the following day, others were not elicited till several days had passed. Perhaps had they been all in our possession at first less difficulty would have been felt in arriving at a diagnosis.

He is one of a family of six children, who live with their mother in two rooms of a house in Butcher's-row, Newport-market, the father having died of phthisis in this hospital at the age of fifty-one. The mother suffers from winter cough, and two of her children have died, one from croup at the age of six. Beyond measles and whooping-cough in childhood this boy has had good health. On Monday, the

[1] This lecture is published because it has been represented to me that the possibly impending prevalence of typhus in St. Giles's parish may lend an interest to a record of one of the earlier cases.

8th of December, he came home from work in the evening complaining of pain in the back and coldness of the feet. Next morning he awoke with severe frontal headache and increased pain in the back, and during the day he had a shivering fit lasting three hours, followed by a sense of heat all over the body. On the 10th he was taken out of bed to a dispensary, where he received some medicine and a plaster for the back, such symptomatic treatment pointing doubtless to the belief that he was suffering only from "cold" and "rheumatism." But he got no better; he became more feverish, lost his appetite, suffered from thirst; the pains affected his limbs as well as the back and head, and he kept his bed the following days until his removal here on the tenth day of his pyrexial attack. In the morning of this day he had complained of some soreness of the throat and difficulty in swallowing. The mother could give but little more information than this. She said that the "two rooms" inhabited by herself and family were, taken together, of about the dimensions of the special ward in which the boy was lying; that one of these rooms was occupied by them during the day, the other being used as a common sleeping apartment; that they have plenty of food, chiefly bread and butter, but little meat; that they never wanted either food or firing; that an older son (who does not live with them) had recently been in St. Giles's Infirmary with "fever"; that she knew of no illness in the house except the case of a young woman, who was attended medically for some months for a sore-throat. To this somewhat negative evidence must be added an important fact, which curiously coincided with the time of the lad's admission into the hospital. For, on the same day, the resident medical officer received a notification from the authorities of St. Giles parish that "typhus fever" had appeared there. It was notified to him to be on his guard for cases that might turn up at the hospital from that parish. This fact was not known to me until the following day, but I think it deserves very full consideration; for it must always be remembered that when epidemics of fever occur, cases of somewhat anomalous type arise, and the fact of the presence of an epidemic in a district whence a case of fever of doubtful nature comes should be enough to turn the scale in diagnosis.

At any rate, we knew this much, that the boy had reached the tenth day of a fever, the onset of which had been sudden, and, seeing that he could not have had much attention, it was not surprising that he was in so prostrate a condition. There was nothing on the face of it to exclude typhoid fever, and the case might have been one of masked rheumatism. In the hope that careful observation for twenty-four hours would help in the diagnosis, the treatment was mainly expectant, directions being given to have recourse to cold bathing if the temperature reached 104°.

At 7 P.M. the temperature did reach 104°. He was accordingly placed in a bath of 60° F. for ten minutes. At the end of seven minutes his pulse quickened and became small, and, on removal, so great was the reduction of his body-heat that at 8 P.M. his temperature was only 98·8° F. At 9 P.M., temperature 101°, pulse 112, respiration 48; my clinical assistant, Mr. Davis, found that there was some tenderness over the abdomen, especially in the right iliac fossa, where gurgling was perceived. He noted also that the patient was deaf, the deafness having come on after the bath; but his headache had left him. His bowels had been twice moved, the stools on each occasion being loose, copious, and dark. At 1.30 A.M. on the 19th, the temperature being 104·4°, a second bath (70° F.) was given for ten minutes. At 4 A.M., temperature 102·6°; at 10 A.M., 101·4°. The following note was taken at 1.30 P.M.:—"The boy seems drowsy, and is deaf; the skin of trunk, and slightly also of limbs, is markedly covered with a mottled rash, pinkish and greyish puncta, and ill-defined blotches, not fading on pressure. He coughs occasionally, and there is much audible wheezing with respiration. The tongue is dry, brown, and fissured transversely, the margins being moist; lips and teeth covered with sordes. The bowels have been moved in all four times since admission; stools watery, of an orange-brown colour, and neutral to test-paper; no abdominal tenderness; no fulness; no tâche. Has passed no urine since admission. About one pint was drawn off by catheter; it is pale, clear, acid, sp. gr. 1026, free from deposit and from albumen. There is a patch of redness on the sacral region." This was his state when Dr. Cayley kindly saw him with me. He considered that the points between enteric and typhus fever were pretty equally balanced, but agreed that it would be prudent to isolate the case. This was accordingly done, and the boy was transferred to the special ward.

Even yet you will see that it did not seem possible to be perfectly certain of the diagnosis. As it is just this question of diagnosis that I wish to make the main burden of my lecture, I will refrain at present from drawing attention to its various problems, but proceed with the narrative of the case, premising that if it were typhus it should shortly come to an end so far as the pyrexial phenomena were concerned, and that abruptly. We had reached the eleventh day, and in most cases of typhus that recover defervescence sets in suddenly,—the crisis occurs—at or about the fourteenth day.

At 5.30 P.M., the temperature having been over 103° for the space of five hours, he was again placed in a bath (70° F.) of ten minutes' duration. At 6 P.M. the temperature was 99·8°; at 10 P.M. it had reached 102·4° He passed voluntarily a large quantity of urine; had been slightly delirious; was now sleeping, moaning at times; bronchitis unabated. At midnight the temperature was 103·4°. Another bath was given, and at 1.30 A.M. on Dec. 20th the temperature was 100°. It reached 102·2° at 6 A.M., but never after that again attained that level. It was now the twelfth day of the disease. He had slept occasionally during the night, and had been slightly delirious. Again had retention of urine. Had ceased to complain of pain, but remained deaf and stupid. The tongue was even more dry and brown than before; it was protruded tremulously, another indication of the state of nervous exhaustion into which he had fallen. At 2 P.M. the temperature was 100·2°, pulse 100, and respiration 40; bronchitic signs very abundant. Ether draught ordered every three hours. Urine acid, 1020, no albumen; it had still to be withdrawn by catheter, although once in the evening he passed a small quantity voluntarily.

On Dec. 21st (the thirteenth day) the temperature was taking a lower range, not exceeding 101° at 1 A.M., and reaching 99·2° at 6 A.M., the mean being about 100°. There was evidently some improvement. He felt better, the bronchitis was less, and the air entered the lower lobes of the lungs more freely. The tongue was moister at the margins, but still dry and cracked on the dorsum. Once in the evening he had his urine drawn off, but in the morning he passed it voluntarily.

At midnight the temperature fell to 98·8°, and at 8 A.M. on the 22nd to 98·2°, the pulse to 80, and respiration to 36. An enema administered the previous evening had resulted in the passage of copious semi-solid pale fæces. He had sweated in the evening, and this morning complained of feeling hungry. The tongue was becoming cleaner and moister; the bronchitis was less; the delirium had ceased, but he was still deaf. On Dec. 23rd (15th day) he slept well; felt very hungry. At noon, temperature 97·6°, pulse 76, respiration 28. The next day he began fish diet; his appetite was good and he enjoyed his food. The tongue was quite moist. A few greyish spots alone remained of the cutaneous eruption, and the skin was everywhere dry, and in places actually desquamating. In fact, the fever had left him, and from that time to this he has continued slowly but surely to improve.

One or two facts in this post-pyrexial period must be noted, and then I shall have given all the essential features of the case. The bronchitis disappeared almost *pari passu* with the fall in temperature. The urine on the 26th deposited much lithates. The pulse-rate fell from 96 on the 24th to 56 on the 25th, 52 on the 28th, 48 on the 29th. On the 26th the first cardiac sound was noted to be rough and prolonged, and on January 2nd a distinct blowing murmur replaced the systolic sound at the apex. Note in this connexion the fact that on Dec. 31st he sat up for a short time, felt faint, and afterwards vomited; so that this, with the auscultatory evidence of the weakened condition of the heart, prompted the direction to maintain for some days the horizontal posture. In other respects all went well. His appetite was good and bowels regular, and at the present time he may be said to be fully convalescent. I am glad to say that the cardiac sounds are now normal, and in a few days he will be well enough to leave the hospital.

(To be concluded.)

MR. GEORGE FOWLER has been presented with an illuminated address by the Committee of the Ballygarvan Dispensary District, Cork Union, upon resigning as Medical Officer, after twenty-one years' service.

ON THE

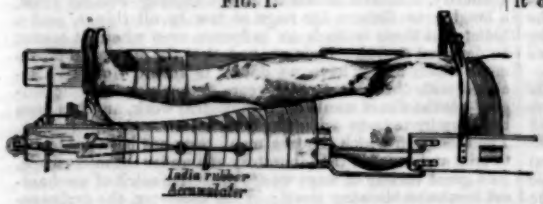
VALUE OF PARALLELISM OF THE LOWER EXTREMITIES IN THE TREATMENT OF HIP DISEASE AND HIP INJURIES,

WITH THE BEST MEANS OF MAINTAINING IT.[1]

BY THOMAS BRYANT, F.R.C.S.,
SURGEON TO GUY'S HOSPITAL, ETC.

THE double splint (Fig. 1), to which I would draw attention, has slowly been built up at Guy's Hospital, under my observation, to meet the different requirements of such cases of disease and injury of the hip-joint as have passed under my care; and, as now completed, it seems to fulfil satisfactorily all the desiderata of surgery in the cases to which it is applicable.

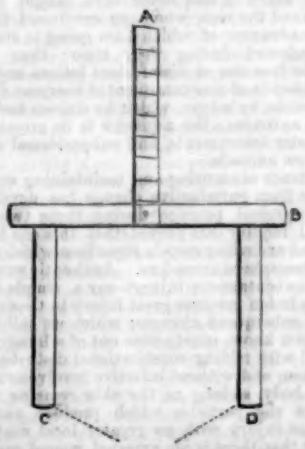
FIG. 1.



Its *advantages* are—(1) that it is far more comfortable to the wearer than any other splint that I have used or seen used; (2) that it most thoroughly immobilises the limb to which it is applied; (3) keeps up a well-regulated, steady, and persistent elastic extension, where extension is needed; and, what is of far greater importance, (4) maintains parallelism of the lower extremities; for I would draw attention to the fact that it is to the want of this parallelism of the lower extremities that many, if not most, of the deformities following a natural recovery with a stiff joint after hip disease or injury must be attributed.

I do not propose, however, on the present occasion to enter into all these points; indeed it is not necessary, since the first three are only to be determined by experience; and I must ask therefore to have them accepted on my testimony, and the last or more important I will now proceed to demonstrate. To aid me in this demonstration I have had constructed the present instrument (Fig. 2), in which the vertical column, A, represents the spinal column; the transverse bar, B, the pelvis, and the two suspended limbs, C and D, the lower extremities. I would recall attention to the fact that in a well-made and healthy subject the spinal column is vertical, and that the pelvis is placed at right angles to the spine, the lower extremities being suspended from their pelvic cups as movable pendents. It is well known, too, that in cases of disease of the hip or of injury to the joint associated with stiffness or anchylosis, this normal position is often greatly altered; and that whilst the positions greatly vary under these circumstances, they may as a rule be resolved into three—viz., those of *flexion*, *adduction*, and *abduction*.

FIG. 2.



Position of parts in normal posture. A, Spinal column. B, Pelvic bar. C D, Femora.

The special abnormal position will readily be recognised in any given case when the patient is placed on the back and the pelvis is brought at right angles to the spinal column. Indeed, this method of examination is the only right one to bring out the true condition of the limb, and should always be adopted.

With respect to the *flexed* position I have little to say: it of necessity causes some shortening of the limb and an antero-posterior curvature of the spine at its pelvic attachment when the patient is erect and attempts to bring the foot to the ground (lordosis); or when he lies down in the supine position and extends the flexed limb; but it does no more—it does not produce a lateral obliquity of the pelvic bar, as does *ad*duction or *ab*duction. Flexion of the thigh upon the pelvis, pure and simple, is however very rare; in most cases where it exists it is combined with either *ad*duction or *ab*duction, and more commonly the former, with some rotation inwards or outwards of the limb.

With respect to *ad*duction I have much more to say, for I think I shall be able to demonstrate that it is the chief cause of deformity in most cases of disease of the hip-joint associated with anchylosis, as well as in a large number of cases of fracture of the neck of the thigh-bone, and that even where, as a result of disease, displacement of the head of the femur or absorption of its neck exists, when of necessity there must be some shortening of the limb, this shortening is increased in the bulk of cases by *ad*duction. To illustrate this we have only to look to the instrument depicted in Fig. 3, when by fixing the right pendent, C, in the *ad*ducted position, and bringing the extremity downwards into the position a patient would naturally assume for walking purposes, the pelvic bar is raised on the affected and depressed on the sound side, with the effect of causing apparent shortening of the diseased and lengthening of the healthy limb; and, on the other hand, if we *ab*duct the right pendent, C, and bring the extremity down as before, for walking purposes, we lower the pelvic bar on the

FIG. 3.

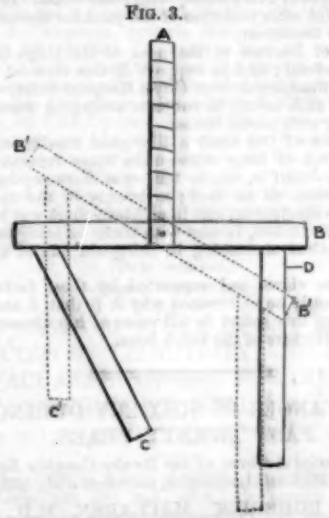


Diagram showing effects of *ad*duction of the right femur upon the position of the pelvis with patient walking. A, Spinal column. B, Pelvic bar in normal position, with C *ad*ducted limb and D straight. B', Pelvic bar tilted up on affected side (C') to allow of progression.

[1] Read before the Medical Society of London, Jan. 12th, 1880.

diseased and raise it on the sound side; apparent lengthening of the diseased limb in early hip disease meaning its *ab*duction, and its shortening *ad*duction.

With these facts before us—for such they truly are, although they are not recognised as they should be—the conclusion is clear that it can only be by maintaining parallelism of the two limbs in cases of disease or injury of the hip that deformity is to be prevented; and under these circumstances I think the splint which I now recommend will be deemed the best we have at our disposal to carry out this end, since by its means both limbs are kept parallel, and adduction with flexion is guarded against; the diseased limb is kept immobile and extended by a well and easily regulated elastic force, and by means of the interruption over the trochanter and pelvic bones, no pressure is applied to tissues covering the bones to encourage movement or to cause discomfort.

In children, indeed, with acute hip disease the splint, well applied, so securely guards against joint movement that the nurse may turn the child over on to the sound side for purposes of cleanliness, and lift him for the performance of the natural functions with a freedom which to the beholder looks like indifference, yet she may do so with confidence that no harm or pain will be produced.

As a *corollary* I would draw attention to the fact that a little *ab*duction of the diseased limb is no disadvantage, since such a position, by tilting upwards the pelvic bar on the sound side, and thus raising the sound limb, tends to neutralise the shortening in the diseased one; some amount of real shortening generally attending or following hip disease or hip injuries. This abduction, when needed, can readily be maintained by this splint.

I would add also that with the evils of the *ad*duction of a diseased limb the advantages of maintaining parallelism of the lower limbs in all cases of injury of the neck or shaft of the femur is rendered clear.

As additional recommendations of the double splint, let me add that in the many hip cases to which it has been applied I have found it not only to answer every purpose for which a splint can be required, but it has done so in a far more satisfactory manner than any other with which I am acquainted; the splint, indeed, combining in itself all the advantages of every other, with some extra. It is moreover, as useful after resection of the joint for disease as it is in its earlier treatment.

In cases of fracture of the neck of the thigh-bone it is equally beneficial; and in support of this view let me add that I have discharged from Guy's Hospital thirty consecutive cases of such injury in subjects averaging seventy-four years of age, with useful limbs.

In fractures of the shaft a like good result may be recorded, for out of forty consecutive cases treated with it in only four—that is, one in ten—was there any important shortening, such as an inch; in twenty of the remainder there was no shortening, and in eighteen there was less than half an inch. In fact, it may with truth be said that there was no practical shortening in thirty-six out of the forty cases.

With these views, and supported by these facts, it will therefore readily be understood why it is that I am in the habit of using this splint in all cases of hip disease, of hip injury, and fracture of the thigh-bone.

THE ADVANCES IN SURGERY DURING THE PAST TWENTY YEARS.

The Presidential Address of the Border Counties Branch of the British Medical Association, delivered July 25th, 1879,

BY RODERICK MACLAREN, M.D.,
SURGEON TO THE CUMBERLAND INFIRMARY.

IN thinking over the subjects on which I might address you, it occurred to me that there was one which I could compass with considerable facility to myself (not an unimportant matter in the short time at my disposal),[1] and with, I hope, profit to us all. This was the progress of surgery since I commenced to study it, wellnigh twenty years ago. And I do not think that I could have set myself a more agreeable task, for it is pleasant to see one's occupation, or study, or science—call it which you will—marching onwards abreast with the van of human progress, and giving earnest of continued advancement. And though all cannot be leaders in the path of progress, yet each earnest follower helps on those in front. I think it may be said that surgery has been influenced by the character of the time. The forces which have been acting on men in general have been actuating surgical men also, so that lines of thought and action outside and inside our profession run parallel. This has been a time of vast progress in mechanical invention, and also one of great scientific advance, the result of slow and laborious research—not a period of vivid mental effort arriving at grand generalisations by the exercise of pure intellect. It has been characterised by a disregard of authority, a determination to accept nothing without proof, a longing to discern the reign of law in all things, and a belief that there is such an influence even where it cannot be detected as yet. Now we find that the special improvement which will, I have no doubt, in future time be associated with the past twenty years—namely, antiseptic surgery—is the direct result of physiological work, and has been built up by tedious scientific observation and experiment. The theory on which the treatment rests has been subjected to trial and proof in the laboratory and under the microscope. In a great variety of ways we see an active spirit of mechanical invention showing itself; in the aspirator, the drainage-tube, the thermo- and galvanic cauteries, in many operative procedures and new instruments.

In the subsequent remarks I do not pretend to strict historical accuracy—that is to say, if an improvement which became accepted by surgeons during the last twenty years had been invented many years before, but been allowed to lie dormant, I shall treat it not the less as an improvement belonging to the period named; for however much it may be to the credit of the individual to have advanced something new, yet, in speaking of surgery as a whole, one must take what is accepted and practised by the majority as the true index of its state.

The period preceding the commencement of my studies was one not less characterised by great advances than the subsequent one. The men who taught us had seen the introduction of chloroform rendering possible prolonged operations and an accuracy of surgical dissection which was before unattainable; they had seen the introduction of subcutaneous surgery, of excision of joints, of ovariotomy, and of the simplification of dressings. They were able to teach anatomy in a way in which it had never been taught until then, and they trained the men who have continued their work. Many of the advances of which I am going to speak to you were foreshadowed during their time: thus antiseptic surgery by the free use of disinfectant lotions and dressings and by the chloride-of-zinc treatment of compound fractures; the drainage-tube by setons, which for sinuses and abscesses simply acted as drains; the aspirator in its present form by several clumsier instruments, and subperiosteal surgery by experiments on animals.

The importance of securing and maintaining wounds in a condition free from putrefactive change has developed as a principle of surgical practice during these twenty years. Experimental inquiry has proved that this can be done by destroying and excluding certain organisms which constantly float in the atmosphere around us. Antiseptic surgery takes as its ideal a subcutaneous injury—say a simple fracture of bone. Such a lesion involves great injury to tissues, effusion of blood, and subsequent changes, which we call inflammation; yet, as you know, ninety-nine out of a hundred of such cases get well with trifling constitutional disturbance, without suppuration, and without infective involvement of other parts of the body, so long as the skin remains unbroken, and excludes the particles which produce putrefaction. Take a similar injury with no greater local destruction of tissue, except that there is an external wound communicating with the fracture, and adopt no special precautions. What happens? Almost certainly suppuration round the wound, in many cases diffuse suppuration of the limb, and not improbably pyæmia. Now, in another point, experimental research throws light on what we see in practice. It has been proved that each inoculation of a putrid animal fluid increases its activity something in this way: inoculate

[1] Owing to the death of the President-elect, Dr. Reeves, there were only a few weeks between the election of President and the delivery of this address.

a wound with pus simply putrefying, you will probably get diffuse suppuration of a limb. Inoculate another wound with the discharge from this, and you will very certainly get pyæmia; use the discharge from pyæmia to inoculate with, and you get virulent septicæmia. When patients are aggregated in crowded wards it is easy to see how this sequence may occur accidentally, and why it was that pyæmia was the scourge of our hospitals. The nature of the violence causing a wound very much influences the dangers from putrefaction in it. A clean incised wound, supposing it does not heal by the first intention, discharges a fluid which, under proper management, ought to flow constantly away from it, and as a result the amount of putrefaction in that wound is small; while a contused wound containing sloughs is a favourable soil for developing a highly irritant and infective virus, and retaining it at the place where it is injurious.

The object of antiseptic dressings is to prevent putrefactive changes at the first stage. They contain germicides of various kinds, and hinder the access to wounds of septic particles. At the same time that they fulfil this object, they have to be so arranged that they allow the discharges to escape. They are of various kinds and applied in various manners. Carbolic acid, boracic acid, thymol, chloral, salicylic acid, and chloride of zinc are the germicides most commonly in use. In the case of wounds made by the surgeon, the doing of this under a cloud of spray prevents germs reaching them. When the wound has been already made before coming under treatment, some antiseptic must be brought into contact with every part of it, and then the dressings applied. It is a mistake to associate antiseptic surgery with the prevention of suppuration. We know that pus will form in parts of the body to which particles from without cannot get direct access; it is therefore absurd to expect that suppuration can always be prevented, but undoubtedly if we bring a wound to the condition of a simple fracture we will get healing without suppuration in a much greater number of cases than if we treat it so that the discharge assumes the irritating properties of decomposing matter. What antisepticity does prevent is pyæmia and septicæmia, which I believe to be merely different degrees or stages of the same ailment. The fluid exudation from a wound, if it is free from foreign organisms, may be absorbed again with impunity; in fact, its liquid portion either is the liquor sanguinis or is derived from it, and pus-corpuscles are indistinguishable from white blood-cells. Different altogether is the result of the absorption of this fluid in a state of decomposition; it may be that merely surgical fever occurs, or it may be that rigors, followed by profuse sweating, a temperature running up to 104° or 105°, with a daily range of four or five degrees, severe constitutional disturbance, and, if the patient lives long enough, abscesses in joints or organs, show that "the life of all his blood is touched corruptably."

What has antiseptic treatment done for surgery? It has enabled injuries, which formerly necessitated amputation, to be treated successfully; it allows operations to be performed which were formerly unjustifiable from their great risk, and it has put pyæmia among the preventable diseases. Let me give you an example of what it can accomplish—a case, I am bound to say, not less creditable to the system than to the surgeon who carried it out. Last year, when I was away on my holiday, a man was admitted into the Cumberland Infirmary suffering from the effects of an injury caused by a crane. His patella was fractured right across, and a wound two inches long communicated with the knee-joint through this fracture. The accident occurred thirty-six hours before his admission; the wound was smelling badly, and discharging sanious fluid. Mr. Smyth, who was then house-surgeon, spent two hours syringing out the wound and knee-joint with 1 to 20 carbolic lotion, and then put on the ordinary gauze dressings. When I first saw the case on my return home thirteen days after its admission, the wound had become superficial; a probe would only pass into it for a quarter of an inch. The knee-joint was perfectly free from inflammatory disturbance, and such discharge as existed was quite sweet. Very shortly afterwards the dressings were discontinued, and an extension apparatus applied to bring the fragments of the patella in contact, and they made in the long run a very good union. Now, according to experience under other forms of treatment, amputation would have been the only justifiable course, for otherwise the almost inevitable sequence would have been suppuration of the knee-joint, then of the inter-muscular planes, high fever, constitutional infection, and death.

The free use of disinfectant dressings, great attention to cleanliness, and guarding against the conveyance of discharge from wound to wound, even where absolute antisepticity is not aimed at, have of late years produced results which, compared with those of twenty years ago, are fairly entitled to be called brilliant, no doubt by preventing the development of a high degree of sepsis.

The drainage-tube is so essential an adjunct to antiseptic dressings that it comes in natural order to speak of it next. Whether used with these or without, it is an appliance of very great value in the treatment of all deep wounds and abscesses. It allows, in the first place, the blood and serous discharges to escape, while almost the whole of a wound can be kept in close apposition, and if suppuration occurs, it hinders the burrowing of pus, conveys it at once outside the tissues, and prevents the mechanical evils it would cause. In the treatment of abscesses it not only secures their thorough evacuation, but it enables this to be done with a very small incision; with a half-inch drainage-tube the largest circumscribed abscess in the body can be kept empty. Now, I can well remember the ever-recurring direction for the treatment of abscess when I attended surgical lectures: "Take a long, straight bistoury, and make a free incision." If a small incision can do more effectually what was accomplished by a large one, it needs no argument to prove the gain.

The aspirator is rather a development than an invention; by means of it fluid can be removed from the body with an almost imperceptible injury, and if very simple precautions be taken, there is no chance of introducing septic agents. A fine needle may be passed into any organ with almost absolute safety, the contents of any of the cavities may be removed, even the intestine can be pierced and it be impossible in the course of a few hours to ascertain the point where the puncture had been made. Perhaps its most frequent use to the surgeon is to make or confirm a diagnosis. There is a swelling; the most careful examination leaves a doubt as to whether it is a fatty growth or a chronic abscess. An aspirator-needle will settle the question at once. Pus is believed to be deeply seated in a limb, it does not form a circumscribed abscess, but is occupying a muscular sheath, no fluctuation can be felt; a hollow needle traversing the limb must bring to light the pus if it be there. The next most common use is to remove fluids from the cavities of the body, as, for example, synovia from distended joints or urine from the bladder. You get a case of impermeable stricture, no instrument will pass it, retention is urgent; if you push a fine needle into the bladder above the pubis, you can empty that viscus as completely as if you had passed a catheter, with hardly any pain and no subsequent local or general disturbance. In one instance I aspirated the bladder eleven times in six days, the patient all the time being so well that he would have gone to his work if I had consented. For abscesses I do not think the aspirator is of much service; it affords few advantages over incision, and is much less effectual, except when the abscess occupies some natural cavity, as the chest or a joint.

(To be continued.)

THREE CASES OF STONE IN THE BLADDER TREATED BY LITHOTRITY AND RAPID EVACUATION OF THE FRAGMENTS (BIGELOW'S METHOD).

BY WALTER J. COULSON, F.R.C.S. ENG.

CASE 1.—Francis A——, a clerk, aged fifty-four, came under observation Oct 2nd, 1879. He stated that about three years ago he passed three small calculi, and that about a year and a half afterwards symptoms of irritation of the bladder began to reappear, but did not become very urgent until quite recently. He now complained of frequency of micturition, pain in the region of the bladder and urethra, and occasional incontinence of urine, which contained a large quantity of mucus. The patient's general health was tolerably good. A calculus was readily detected on sounding.

On Oct. 13th, the patient being placed under the influence of ether, I crushed the stone about eleven times, using

several lithotrites in succession. Bigelow's exhausting apparatus was then used, and by its means a great quantity of detritus was removed from the bladder. The instrument had to be withdrawn, as a fragment had become impacted in its distal orifice. After reintroduction a further quantity of débris was removed. The straight tube of Bigelow's apparatus was found to answer better than the curved one. After the operation the patient expressed himself as very comfortable. There was no trace of rigor; he slept well, and had to pass urine only three times during the night, though on first falling asleep a little escaped involuntarily.

On the following day the patient was able to hold his urine for three hours, and complained only of a little smarting along the urethra during micturition. The urine was tinged slightly brown, but was moderately clear, and contained some fine grit.

Oct. 16th.—Urine much clearer, but still contains excess of mucus. The patient can retain his urine for more than three hours; no incontinence, and no grit passed.

22nd.—I examined the patient with the lithotrite and sound in succession, but could not detect any fragments. The man can now hold his urine for four or five hours; there is neither pain nor straining in micturition, and no incontinence at night. The urine still contains a slight excess of mucus, to check the formation of which four ounces of decoction of triticum repens was ordered three times daily. The weight of the fragments removed during the operation was 130 grains.

CASE 2.—Thomas B——, aged seventy-five, artist, came under observation October 13th, 1879. He stated that he had always enjoyed good health, and never had gout or any serious illness. Some acute lumbar pains, which he had thirty years ago, would appear to have been of rheumatic origin. Three years ago he passed some reddish gravel, but none has appeared since. His present symptoms have troubled him for about a year. They are mainly great frequency of micturition, especially during the day, pain in the perineum during and after micturition, occasional retention of urine, but never any hæmaturia. The patient is a thin, healthy-looking man, not appearing as old as he is, and tolerably active. Florid complexion; no sign of arterial degeneration. Passes urine four or five times in an hour when moving about, but not more than once as a rule during the night. The urine is of a light amber colour, and acid reaction; sp. gr. 1018. No abnormal constituents beyond a little excess of mucus. There is no family history of stone or gout.

On October 15th, the patient having been placed under the influence of ether, I introduced a lithotrite, and discovered that the bladder contained two calculi. One of these, about three-quarters of an inch in diameter, was first seized and then crushed eleven times in succession with one instrument and nine times with a second. The second stone was then sought for, and crushed repeatedly, several lithotrites being used in succession. A large quantity of detritus was removed at each withdrawal of the instrument, and some difficulty was caused by portions of débris getting loose in the urethra. Before introducing the tube of Bigelow's apparatus it was found necessary to enlarge the meatus, owing to the smallness of that aperture. Both the straight and curved tubes were used, some considerable difficulty being experienced in introducing either tube through the prostatic portion of the urethra. Eventually the receiver of the apparatus was attached to the tube and the bag gently squeezed. Slight rotation of the straight tube caused it to pass onwards into the bladder. A considerable quantity of finely powdered detritus was then drawn into the receiver. The patient was under the influence of the anæsthetic for forty-two minutes. After the operation there was neither rigor nor discomfort except a little smarting, due to the enlargement of the meatus. The urine passed after the operation was blood-stained, and contained fine dust. Total quantity of detritus removed 195 grains. Temperature same evening 100·4°; pulse 120.

On the second and fourth days after the operation there was a rigor, followed by sweating, but the symptoms passed off without any ill effects. On the 22nd a lithotrite was introduced, and several small fragments crushed, and the operation was repeated a week later, when Bigelow's apparatus was again used, and a few fragments evacuated. After this date all the urinary trouble abated, and on the 7th November the patient declared himself to be quite well. Nothing abnormal could be detected in the bladder.

CASE 3.—Robt. C——, aged sixty-eight, came under observation Nov. 25th, 1879. Had suffered from symptoms of calculus for about eighteen months, but his sufferings had become much aggravated during the last four months. He complained of severe pain in the back and frequent calls to pass urine, especially during the night. The pain was much aggravated by exercise. No history of gout or rheumatism, and none of his family appear to have suffered from stone. The patient's expression was anxious, his tongue very dry, white and furred; great thirst; slept badly; pulse 114; temperature normal. Urine abundant, very high-coloured, with a fetid ammoniacal odour; reaction alkaline; albuminous (about one-tenth); deposits triple phosphates in abundance; no casts; sp. gr. 1015.

On examination with the lithotrite several calculi were detected; a rigor followed. The patient was kept quiet for a few days, during which the constitutional symptoms somewhat improved. The pulse fell to 90, and the nights were less disturbed. On Dec. 3rd, the patient being placed under the influence of ether, I crushed several stones, using the fenestrated and plain lithotrites in succession. Bigelow's curved tube was then introduced, and a quantity of very fetid urine escaped. A large quantity of detritus removed by means of the exhausting apparatus. The tube was then withdrawn, and the lithotrite again used, after which more detritus was removed. The patient was under the influence of the anæsthetic for fifty minutes, and bore the operation well. On examining the detritus several small calculi intact were discovered; these had escaped the lithotrites. The total amount of débris was three drachms. At the conclusion of the operation a few calculi and fragments appeared to be still in the bladder.

All the symptoms were relieved by the operation. The patient passed urine freely during the succeeding twenty-four hours, when it was thought expedient to introduce a catheter to remove any residual urine. About a pint escaped, muco-purulent and very offensive in character. The catheter was afterwards used every four hours, and the bladder washed out night and morning with dilute Condy's fluid. This gave much relief to the patient, and improved the character of the urine. A week after the operation, however, the urine was still muco-purulent, distinctly albuminous, and had an offensive ammoniacal odour.

Dec. 17th.—The character of the urine and the general symptoms having improved, the operation was repeated under ether as before. After several crushings with a fenestrated lithotrite, 270 grains of débris were evacuated. After the subsequent use of a plain instrument 110 grains were removed. The patient was under the influence of ether for forty-two minutes, and the operation was well borne. In the after-treatment the urine was withdrawn as before, and diluted Condy's fluid used to wash out the bladder. On the 21st the patient was reported as sleeping well, with pulse and temperature normal, and the urine comparatively clear and free from offensive odour. The quantity passed, also, which had been excessive, sometimes reaching as much as six pints in the twenty-four hours, was normal. On the 22nd I detected and crushed a small fragment, which was all that remained in the bladder. The patient was allowed to be up daily, the urine being still drawn off every four hours.

Remarks.—The three cases above detailed afford convincing evidence of the tolerance which the bladder exhibits of prolonged instrumentation, and of the advantages of Dr. Bigelow's modification of lithotrity. In the first case, in which the patient's symptoms were comparatively mild and of recent standing, the relief was immediate, and there was no drawback in the form of a rigor or local disturbance. On the tenth day after the operation the patient was well. The second case was one of greater severity, and there were two calculi to be dealt with. It was not, however, till the second day after the operation that any constitutional symptoms appeared, and these were comparatively trifling in degree, and soon abated. The difficulty experienced in introducing the evacuating tube was due to the fact that the lining membrane of the urethra, especially of the prostatic portion and near the meatus, had become coated by pulverulent débris, which obstructed the passage of the instrument. This difficulty was at once removed by injecting fluid through the tube passed down to the prostate, thus washing out the neck of the bladder. Under similar circumstances, Dr. Bigelow used the female blade of a small urethral lithotrite in order to remove the abundant and closely adherent calculous matter from the walls of the urethra. The condition of the third patient was in many respects unfavourable for any

operative procedure. There was considerable constitutional disturbance, while the pain, the frequent micturition, the state of the urine and its unusual quantity, pointed to severe vesical and renal irritation. The result of the operation, however, proved that the proper course had been adopted. All the symptoms were forthwith ameliorated, and although the operation lasted fifty minutes, and involved protracted manipulation, it was followed neither by local nor constitutional troubles of any kind. The second operation was equally successful. The fenestrated lithotrite was found to answer better than the plain instrument. The former does not pulverise the calculus, but reduces it to small fragments which are not repeatedly caught by the instrument, but are sufficiently reduced in size to pass readily through the tube. Besides this the fenestrated lithotrite is readily freed from débris by simply screwing the male blade home, and thus the repeated withdrawals and reintroductions, necessary in the case of the plain instrument, are dispensed with. The escape of débris takes place more readily through Bigelow's straight tube than through the curved one. The difference was demonstrated by the quantity which escaped (110 grs.) in the second operation on the patient, after only three crushings with the plain instrument. The case altogether well illustrates the advantages of Bigelow's method. The total amount of detritus removed at the two operations was far greater than could have been got rid of in any reasonable time by the unaided efforts of the patient, while the freedom from secondary, local, and constitutional troubles, and the direct amelioration of all the symptoms, may fairly be attributed to the rapidity with which the bladder was freed from the source of irritation—an object which Bigelow's method satisfactorily accomplishes. The adoption of the method has the further advantage of enlarging the range within which lithotrity is applicable, and it encourages the surgeon to deal with much larger stones than was formerly the case. What the limits of the operation, as determined by the size of the calculus, really are, further experience alone can decide, but the prospect of greatly diminishing the number of cases subjected to lithotomy on account of the dimensions of the calculus—a class in which the mortality is especially great—seems almost certain to be realised.

RINGWORM (OF THE HEAD): DIAGNOSIS AND TREATMENT.

BY ALDER SMITH, M.B. LOND., F.R.C.S.,
RESIDENT MEDICAL OFFICER AT CHRIST'S HOSPITAL, LONDON.

(Concluded from p. 55.)

IN some old chronic cases, where all the patches have disappeared and the disease has passed into the *disseminated variety*, I believe the best chance of a cure is to subject the entire scalp to a very close examination with a lens, and to place a drop of croton oil with a very fine sable brush wherever the isolated stumps or the black spots can be seen. (I consider a case where there are the black dots as the most difficult to cure.) The oil usually causes a pustule, and the loosened stump can then be removed with a pair of forceps. Mine are slightly curved towards the ends, are strong, yet fine, with minutely serrated points. (Fig. 2.)

FIG. 2.[1]

The glass I use is a combination one, as described by the late Dr. Tilbury Fox; but it is mounted on a firm stand with a ball-and-socket joint, so that it can be placed in any position, while both hands remain free for manipulation.

I manage to thoroughly examine the scalp by commencing at the top, and turning over layer after layer of the hair in the wrong direction with one blade of the forceps, while I hold down the hair just turned over with my left hand, until the whole back of the head has been inspected. During this time I examine the scalp minutely with my fixed glass or simple eyesight; then, turning the child round, look over the front part of the head in the same manner.

In treating a case like this, it is advisable not to have the hair cut too short, but to keep it about two or three inches long. It should be seen once a week, and an attempt made to pull out every stump as it comes into view, and then if it breaks off, which is most probable, a drop of croton oil should at once be applied to the follicle. At the next examination the oil must again be put on any stumps that break off, as well as upon any fresh ones that may appear. In a very bad case this may have to be done for weeks or months before a complete cure can be effected. During this time, if there are very many stumps about, I prefer, but it is not essential, to have the hair only about two inches long, and a large, thin poultice kept on day and night under an oilskin cap. The constant heat and moisture very much help the croton oil to produce the necessary pustulation, and by preventing the spots from drying render the extraction of the stumps easier. In fact, with a case like this, I like to have the scalp well bathed with hot water for ten minutes before I commence extracting the stumps; and also to have a small basin, with a sponge and some water in it by my side, on which to wipe off the extracted stumps from the forceps. This treatment must be continued until a fortnight or month passes by without any stumps being seen, and then the case may be considered cured.

For the last few years I have used a remedy, suggested to me by the late Dr. Tilbury Fox, where there are only a very few minute patches, and *where time is of the utmost importance*. This is a paste made of equal parts of crystallised terchloride of antimony and lard. It is most intensely escharotic, and always produces a bald place by destroying the hair-follicles wherever it is applied. Therefore *it must only be used in very exceptional cases*, and to places not larger than half a split pea. I have sometimes used it to a very chronic patch, when it was absolutely necessary to get it cured by a certain time, and often apply a very minute dot of it to the black spots so often mentioned before, as well as to any isolated stumps that cannot be removed under the croton oil treatment; but I must again warn anyone against applying it too freely, as it is sure to cause a slough, and, therefore, a bald place.

Even all treatment will fail sometimes, and I believe there are undoubtedly inveterate cases that cannot be cured, but such almost always get well spontaneously at about the age of fifteen to seventeen. I have hardly ever seen a boy leave this school at the age of sixteen with any stumps. When I have had such inveterate cases here I have continued to use the carbolic oil.

It is important to remember that, in very young children, almost anything will cure ringworm, and that strong remedies should never be used.

General treatment.—Disinfection of the clothes is advisable; caps, coats, neckties, &c., ought to be baked, and other things boiled. Brushes, combs, and towels must be kept separate, and the former cleansed with carbolic lotion. Boys at school should always have separate washing flannels, towels, brushes, &c.; and in schools the matron or other person in charge of a certain number of boys or girls ought to examine the heads weekly, and send anyone with a suspicious spot for the doctor's opinion. The best preventive I am acquainted with is carbolic oil, in the proportion of one to eight of olive oil. This should be applied to the heads of the other children when one in a family has ringworm; it can be used for months without producing any ill-effect.

The doctor should at first personally superintend the application of the remedies, and should show the mother or nurse how to epilate and to rub in the required ointment, &c.

Internally, in chronic cases, especially in weakly, ill-

[1] These forceps can be obtained of Messrs. Arnold and Sons, Smithfield.

nourished children of a strumous or lymphatic diathesis, it is advisable to give cod-liver oil and other fats, together with a generous diet and steel. It is a remarkable and certain fact that children with chronic ringworm generally dislike fat. Change of air is also beneficial in these cases.

Isolation.—I believe the complete isolation, if possible, of recent cases to be most essential. Children suffering from any form of the disease should not be admitted into a school until they are quite cured, except, perhaps, when a child has been thoroughly well treated for a year or more, and yet a few isolated stumps remain that cannot be removed, or at any rate cannot under the usual treatment, even of the most skilful kind. These special chronic cases are brought up, as I too well know, for admission into public schools, at short intervals, for one or even two years, although constantly under the best medical treatment. What is to be done with such cases? With regard to Christ's Hospital, when boys reach a certain age they cannot be admitted, and therefore the time arrives sooner or later when a boy must either lose his presentation or be passed into the junior school suffering from chronic ringworm. When this time arrives I advise admission into this particular school rather than that a presentation should be lost, as I am strongly of opinion that these cases can be admitted with comparative safety to the other boys, provided they are regularly looked after, and some parasiticide, such as carbolic oil, used to the head, while the stumps are removed by the croton oil treatment. I have had many boys in the London School with these isolated stumps, and have not found that they have spread the disease. Again, it must be remembered that if chronic cases be admitted when they are apparently free from all stumps, they almost aways relapse, and thus a boy who has suffered from chronic ringworm is almost sure to have isolated stumps appearing for months. I therefore always allow old inveterate cases of disseminated ringworm, when already in the school, *and under proper supervision and treatment*, to mix with the other boys, and firmly believe it is a safe course to follow. I feel confident that the rest of the boys in a school run less risk of taking the disease from these disseminated cases, *under proper supervision*, than they do from mixing with other children in private families, *who constantly have ringworm without its being known, and who therefore are not under any treatment*, as proved by the fact that children supposed to be free from the disease, and who are brought for admission into this school, from all ranks, are found to have ringworm in the proportion of over 8 per cent.

In conclusion, let me again call attention to the principal points touched on in this paper. Firstly, as so many medical men consider ringworm well when it is in a most chronic state, it is important not to certify a case as cured, although the hair may have grown again on the diseased patches, until after a thorough examination of the scalp has been made, and we are certain that there is not a single stump remaining affected with fungus, or even a black dot or follicles with no hairs growing from them. Secondly, that children should not be certified as free from the disease and fit to enter a school, unless the whole head has been minutely examined.

Medical men should also bear in mind that there is such a variety as *disseminated ringworm*, where no patches exist, but only isolated stumps, and that this is one requiring very great care for its detection; that stumps are not finally removed if they only break off, which is commonly the case; that no reliance for diagnosis or prognosis can be placed on the microscopical examination of ordinary hairs taken from a diseased patch, but only of the short stumps; that ringworm of the head exists among young boys without their friends being aware of it in the proportion of over 8 per cent.; is rarely contracted after fourteen years of age, and usually gets well spontaneously about the age of fifteen to seventeen.

Finally, as to *treatment*, I would specially call attention to the use of carbolic-glycerine, or the ointment composed of carbolic acid, citrine, and sulphur ointments for recent cases, and to the important practical points, that they must be well and frequently rubbed in.

With regard to *chronic ringworm*, it must be remembered that the conidia exist at the very bottom of the follicles; that the difficulty in curing the disease is not to find a parasiticide, but to obtain one that will penetrate deeply; that the stumps are so diseased that they always break off on attempted epilation; that oleate of mercury is one of the best penetrating remedies; that it must be well rubbed in, and the head washed only once a fortnight; and that after a few months, if the disease is not absolutely well, kerion ought to be produced.

With regard to *kerion*, it should be remembered that the artificial production of it should only be attempted in old chronic small patches that have resisted all other treatment for months or years; that it should be produced by the daily application of croton oil, together with constant poulticing; that croton oil must be used with very great caution till the hairs get loose in the follicles, the great aim of the treatment being to cause inflammatory swelling of and effusion into the tissues around them; that the stumps must be removed time after time as they appear; and that great care must be taken to prevent the oil getting on to the face.

Lastly, with regard to the *disseminated variety*, it is best treated by touching each stump with croton oil, week after week, except perhaps in very exceptional cases, where a minute quantity of the antimonial paste may be required.

HUMAN AND ANIMAL VARIOLÆ: A STUDY IN COMPARATIVE PATHOLOGY.

BY GEORGE FLEMING, F.R.C.V.S.,
ARMY VETERINARY INSPECTOR.

THE recent conference held in London on Animal Vaccination will not have been without a useful result, if it has been the means of not only drawing attention to this particular subject, but also to the very meagre knowledge we seem to possess with regard to variola in animals, and, indeed, of all animal disorders which are communicable to mankind, and *vice versâ*. The discussions which took place at the meetings of the conference afforded another proof of the necessity for instituting what I have for years maintained should form a branch of medical study—a chair of Comparative Pathology at each of our medical schools. Surely a knowledge of animal diseases, in their relation to those of our own species, is of far more moment to the surgeon or physician in the practice of his profession, than an acquaintance with zoology or comparative anatomy. Such chairs are established in nearly all, if not all, continental medical schools, in which their value has long been recognised. Why is it, then, that we are so slow or so unwilling to adopt what is so manifestly and so urgently required in order to complete the student's education, and to render him a more useful and enlightened member of society?

From the opinions expressed at the conference, as well as elsewhere, I gather that the view is largely entertained among medical men in this country, that human and bovine variola, or vaccinia, are one and the same disease: the latter being dependent for its origin and maintenance upon the former, though undergoing a certain and special modification in the passage of its virus through the organism of the ox; so that, when retransplanted in the human species, it is no longer small-pox, though it offers protection, partially or wholly, permanently or temporarily, against an attack of that malady.

It would also appear to have been accepted by those present at the conference, that there are only two distinct kinds of variola—one affecting man, the other the sheep. And one opponent of animal vaccination, in dwelling upon the dangers likely to attend that operation, pointed out the existence of several diseases which, he asserted, bovines are liable to, and which he would lead us to infer might be communicated to those vaccinated direct from the calf. Among the diseases he enumerated were contagious pleuro-pneumonia, anthrax, glanders, certain disorders due to helminths, and "entozootic asthma."

Now, without at present claiming to be a supporter of animal vaccination, I may as well state that the apprehended danger from these disorders is more or less purely imaginary. Contagious pleuro-pneumonia is peculiar to cattle, and cannot be transmitted in any form to other species, not even by direct inoculation of its morbid products; glanders is not a bovine disease, and all attempts to convey it to the ox tribe have invariably failed; anthrax runs

its course too rapidly and is too marked a disease to be considered in connexion with animal vaccination; the worm disorders have no relation to the subject under discussion; while as for "entozootic asthma," why, I never heard of it before, and I fancy nobody else, so that it may also be dismissed as unworthy of consideration. Candidly speaking, if I anticipated any danger in animal vaccination, from the presence of constitutional disease in the vaccinated calf—which I do not at present—I would rather be inclined to look upon the existence of tuberculosis with some suspicion; but this serious malady the speaker did not refer to. There is, however, no evidence that it can be conveyed to mankind by retro-vaccination; and, to my mind, the risk is so infinitesimal, considering that the calf is so rarely affected with the disease, at least in an active form, that I think it may not be taken into account just now.

Of infinitely greater importance is the relationship between human small-pox and cow-pox, which was treated as a merely collateral subject at the conference, but was, nevertheless, made the occasion for some strong opinions being expressed as to the absolute identity of the two maladies. The solution of the problem as to whether small-pox and cow-pox are one and the same disease, modified only in their manifestations by differences in the organism of man and the ox, or whether they are distinct and independent disorders having only a family or generic resemblance, well deserves the most serious efforts; constituting, as it does, a question of the very highest scientific and practical interest, and one about which there should be nothing speculative. Its practical aspect more particularly invites examination, for if it be demonstrated that the two are identical, the cow-pox being derived from small-pox, then there is no occasion to hesitate as to the selection of vaccine lymph; for we might, without compunction, take that which is directly elaborated in cows through inoculation with the small-pox matter of man, and thus save all the search and precautions at present imposed upon us in order to obtain a vaccine fluid which shall be innocuous, and at the same time sufficiently potent to afford protection from variola. But if, on the contrary, the small-pox communicated to the cow retains all its characters, and when again transferred to mankind merely reproduces itself in its dangerous, general eruptive and highly infectious form, then recourse to variolo-vaccination would be a serious and reprehensible step, and one which should be opposed. Or if the small-pox virus, in passing through the cow, should still retain its variola-producing attributes, but yet become so subdued as to be as harmless, and still as effective as vaccine, ought it to take the place of the latter altogether, or should it be employed simply as an auxiliary? These questions have been asked before, and I venture to ask them again, as a reply to them is of the greatest moment at this particular time, not only in regard to small-pox, but to other virulent affections. For if, notwithstanding the apparent differences in their characters, the human and bovine diseases are the same in nature, the virus only being beneficially modified or transformed by transference from the one creature to the other, it gives us reason to hope that the virulent principle of other contagious scourges which only attack once in a lifetime may be similarly attenuated by emigration from one species of animal to another, and still retain its protective influence. But if the human and the cow disease are due to a different virus, and the one has power to neutralise the other, the reciprocal neutralisation being greatly to the advantage of the creatures concerned, then also there is good reason for hoping that with other contagious maladies of the same, or even a different type, there may be discovered a similar means of destroying their germinative power.

Notwithstanding the immense importance of the question, the long time that has elapsed since vaccination was introduced, the multitude of works upon the diseases, and the great opportunities that have been afforded for clinical and experimental observation, it is indeed astonishing to find opinions still divided on the subject of human and animal variolæ and their relationship. Strange it is to note doubt and hesitation, and unfruitful discussions as to the nature, advantages, and dangers of vaccination, when we reflect that it has been practised for ninety years, and is universally adopted all over the world as a prophylactic against one of the direst of the pestilences which haunt the human family.

But so it is; and, as before observed, the tendency among medical men, at least in this country, appears to be in favour of small-pox and cow-pox being due to one and the same virus; in opposition to the Jennerian doctrine, that the cow-pox was derived from horse-pox, and had none but an antagonistic relationship to human variola. Their belief seems to be founded on the reports of certain experiments performed by four or five persons (Gassner, Thiele, Sunderland, Badcock, Ceely), in which positive results were obtained some forty or fifty years ago, and on accounts of a few instances in which small-pox was said to have been communicated from sick people to animals. Jenner, according to this opinion, was mistaken; his cow-pox was not derived from "greasy-legged" horses, but from the small-pox-stricken people who went about and handled the milch cows, and so infected or inoculated them. It follows that only cows were (and are now) affected; that cow-pox was much more prevalent in those days than now, because small-pox was more prevalent; that only mankind and sheep have a distinct variola of their own, for the simple reason that those who entertain this opinion never saw or heard of any other species being affected with variola; that failures in recent attempts to produce cow-pox, by inoculating cattle with small-pox virus, and the production of small-pox when the matter of the eruption was transferred from the cows to children, were due to the human virus being merely deposited in a little pouch in the animal's skin, where it did not undergo the supposed modification; and that, though all recent experimenters have failed in developing cow-pox from small-pox, yet at the period mentioned it was accomplished without difficulty.

Deeply impressed with the vast importance of arriving at the truth in such a grave question, I have for many years devoted much attention to it, and have already done what in me lay to settle it: at least so far as the variolæ of animals are concerned, as will be seen on referring to my work on "Veterinary Sanitary Science and Police" (vol. ii., p. 28); and I will now venture to dispute every one of the arguments brought forward to prove that human variola and cow-pox are due to the same virus, or are the same disease; or that there are only small-pox and sheep-pox as distinct variolæ. With regard to animals, I may at once state that I believe every species has its own independent and particular kind of variola, and I am unable to understand why man and the sheep should alone have the unhappy privilege of being the special subjects of different forms, and this privilege be denied to all the other creatures.

Whether these forms may have been originally derived from a common or primitive source or type, I will not now stop to inquire; but that they exist and compose a group of diseases rather than one malady, cannot be matter for doubt. That they more or less widely differ from each other, that in each species each form has a special character, and though that which is particular to one species may be transmitted to another species, yet the variola of this species need be scarcely a subject for dispute; while the fact that their differences are marked, not only with regard to their particular features, but also as to their capability of transference to other species, and their antagonism to each other, has been clearly demonstrated. Admitting that which I shall presently attempt to prove, that the cow has its own variola, we know that when this is communicated to man it does not produce small-pox, though it protects from it. The sheep-pox has been inoculated on man by many experimenters—among others, by Marchalli, Sacco, Voison, and Hering, but only a small localised group of pustules, quite unlike the eruption of ovine variola, has appeared at the seat of inoculation, and no protection from small-pox or vaccinia has been conferred. Neither human variola or yet vaccinia will give rise to sheep-pox, neither will their inoculation protect the sheep from its own variola. Horse-pox is communicable to the cow and mankind, and protects them from their variolæ, as well as the human species from vaccinia, while vaccination protects the horse from its pox. As we shall see immediately, though the virus of human small-pox, when deposited in the skin of the cow, does give rise to a local papulation—often very trifling, exceptionally very marked,—yet this is not the regular eruption of cow-pox, either in its appearance or course, and it does not prevent the cow being successfully vaccinated at the same time, though it appears to destroy the aptitude to receive vaccinia; while in two or three transmissions through the bovine species it becomes altogether impotent. The same results are observed in the horse, which, however, appears to receive the virus of human small-pox more readily, and to exhibit more marked local phenomena than the ox; while this inoculation also protects it partially, if not entirely, from the action of vaccine virus, which it otherwise so readily

receives. As in the ox likewise, the small-pox virus soon loses its potency in being carried from one animal to another—it cannot be cultivated in them; and experiment has demonstrated, that no more in the organism of the horse than in that of the ox can human variola be transmuted, but that after passing through the bodies of solipeds, and again transferred to man, it has lost none of its characteristic feature.

Cow-pox can be very readily transferred to man, the ox, horse, and goat, the first three showing an equal aptitude for its reception; in them also the transmission of the disease is indefinite—i.e., the virus may be cultivated, without impairment, for a limitless number of generations, and it confers immunity against the variola of man and the horse, while the ox itself is protected. But while vaccination only produces in man and the ox a local and limited eruption, in the horse it often produces a startling pustular exanthem, which, in character and seat, differs in nothing from natural horse-pox. Another peculiarity in the action of the vaccine virus in the horse is its tendency to produce this vaccinal eruption, and at the same time to confer immunity, when introduced directly into the lymphatics or bloodvessels; while in the ox it does neither under this condition—all circumstances which would lend support to the opinion of Jenner, that the horse is really the true source of natural vaccinia.

Vaccination in the dog usually only produces small red nodules at the punctures, but nothing at all resembling the vaccinal eruption. It is the same with the pig. In the sheep a small papule generally forms at the seat of inoculation, with rarely a little vesicle that rapidly becomes encrusted. Revaccination from this to calves gives negative results.

Not only in their special characters do the variolæ of man and animals differ, but also in their apparent mode of extension. Human variola and sheep-pox differ widely from each other in some respects, particularly in their not acting antagonistically, and in the appearance of the eruption, but they are identical so far as their diffusion is concerned. They are both infectious and contagious, and can be transmitted by fomites, as well as by actual contact; while their virus possesses a vital resistance somewhat remarkable. Cow-pox, horse-pox, and the variolæ of other animals would appear to depend for their dissemination upon their contagious properties only, and their virus readily becomes deteriorated.

There are other peculiarities in the variolæ of man and animals which still further differentiate them, but these I shall not allude to here; so pass on to the consideration of the far more pressing question as to the identity of small-pox and cow-pox, and an examination of the arguments brought forward in support of this identity. But before doing so, I may as well confess that I do not for a moment hold with the abiogenetic or "spontaneous" origin of variola either in man or beast, and am prepared to maintain that whenever and wherever, and in whatever species the disease manifests itself, it is always due to its own special contagium, no matter how this may be conveyed.

(To be continued.)

POISONING BY DIGITALIS.

BY J. B. MAWER, L.R.C.P., &c.

POISONING by digitalis being so rare an occurrence, I think the following case cannot fail to interest the many readers of THE LANCET.

A married lady, thirty-four years of age, of fair complexion, nervous temperament, and somewhat anæmic, had been ordered to take two or three of Homolle's granules of digitaline daily for palpitation and other hysterical symptoms, each granule containing a milligramme of the alkaloid.

On the 25th of April, about 3 P.M., she swallowed, for some reason best known to herself, fifty-six of these granules—the whole, in fact, which remained in the phial. Immediately after this she went out to visit her sister, a quarter of an hour's walk, where she remained about an hour, and then returned home on foot. She felt no inconvenience, except a bitter taste in the mouth, until the dinner hour at six, when, on trying to take her soup, she felt very giddy and disposed to vomit. She at once went to bed, and, feeling still more indisposed, her servant-maid rubbed her neck and hands with rum. She then vomited two or three times at intervals of ten minutes, and began to suffer from pain in the stomach. The pulse was 65; temperature normal, and perspiration was breaking out on the forehead. At 7 P.M. she was seen by a medical friend, who prescribed two grains of tartar emetic, an ounce of sulphate of soda, in three ounces of water. Fortunately for her she only took two spoonfuls of this depressing potion, and even that she did not retain, for she continued to retch and vomit almost incessantly. At half-past eight he ordered her potion of Riverius six ounces, syrup of ether one ounce, but the stomach would absolutely retain nothing. The face now became dusky, the pupils dilated, the pain of stomach increased, the extremities grew cold, the pulse weak and irregular, numbering 48 in the minute, and she complained of great oppression in the precordial region; the breathing became slow, with deep and prolonged inspiration. At 11 P.M. I saw her for the first time, and found her in the state just described. I ordered her to swallow very frequently morsels of ice, and strong infusion of coffee also iced, sinapisms to be applied in succession to the stomach and legs and over the region of the heart, the trunk to be surrounded by bottles of hot water, and most strictly enjoined the horizontal position, forbidding any movement, even of the head from the pillow, during the retchings, which still persisted. I also advised a teaspoonful of cognac to be added to the coffee every half hour, and a dose of medicine to be given from time to time, composed of syrup of ether, ammonia, and cinnamon water, and to apply smelling salts frequently to the nose, which last, she said, afforded her much relief.

April 26th.—On visiting her this morning, I learned from the medical man who had remained in attendance during the night, that she had not slept at all, but had continued to retch about every hour, and the temperature of the body had been maintained only by the constant application of the hot bottles. I found her very weak; the pulse 44, feeble and intermittent; sighing respiration; the face almost livid; the pupils still dilated, but the intellect perfectly clear; there had been no evacuation from the bowels, but the urine had been abundant. As the continued irritability of stomach precluded all possibility of giving either medicine or food by the mouth, I ordered a strong infusion of serpentaria with ammonia mixed with an equal quantity of beef-tea to be administered per anum every two hours, and to continue only the ice pills and cognac by the mouth. As she complained so sadly of the precordial oppression, comparing it to a heavy stone lying on her chest, I ordered towels soaked in rum to be placed over the chest and abdomen, to be kept always wet by renewal.

On my second visit, about noon, I found her even weaker; the temperature still artificially maintained; the skin dusky, non-elastic, as in cholera; respiration prolonged and sighing; pupils still dilated; pulse 42, very weak and irregular, intermitting once in every two or three beats; mind intact. The vomiting having become much less frequent, I ordered her to take strong beef-tea with lemon-juice, two or three spoonfuls every half-hour, to continue cognac in the intervals, the compresses of rum, and the enemata with the addition of yelk of egg and Liebig's extract, and to ply the nostrils with ammonia, which gave her immense satisfaction. At 9 P.M. I found her decidedly better; the retchings had ceased; the pulse had risen to 52, though still equally feeble and intermittent, there being two beats and a pause, as before. She had retained the beef-tea and had taken strong coffee with cognac regularly. To go on with all the remedies and also two grains of musk every hour. By midnight the pulse had risen to 60, the intermissions one in four beats, the heat almost normal, and my patient began to get snatches of sleep twenty to thirty minutes at a time.

27th.—At 5 A.M. pulse 62, but still weak, with one distinct intermission in every five beats; feels much better; face and surface generally of natural colour, precordial oppression very much diminished. On my visiting her at 10 A.M. I learned the particulars just stated, from my colleague, who had again remained all night. I now found her much improved; pulse 60, but stronger and fuller, with much less frequent intermissions, one in every eight or nine beats. She had slept very nicely, and had taken light food in small quantities. Ordered to continue the same treatment, and on no account to quit the horizontal position.

28th.—Improved in every respect. Sleeps comfortably and eats fairly. Ordered to leave off the nutritive enemata.

29th.—Going on so well that I allowed her to sit up in bed for the first time, while I had my finger on the pulse, which was 66 and quite regular, as it only rose to 78. Twelve pulsations continuing regular, I gave her leave to sit up in bed for a short time occasionally.

From this date she made rapid progress towards recovery, and excepting a slight eruption of urticaria, due perhaps to the action of the musk, she was soon perfectly well. I was not at that time aware of the antagonism which is alleged by Köhler to exist between digitalis and saponine, otherwise I should certainly have given the latter a trial.

Bucharest.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

STRANGULATED INGUINAL HERNIA, WITH RUPTURE OF SAC AND INTESTINE; CLOSURE OF WOUND IN INTESTINE WITH CONTINUED SUTURE; REDUCTION; RECOVERY.

(Under the care of Mr. JAS. ADAMS.)

THIS case is of interest in consequence of the impossibility of adopting the ordinary practice of leaving the ruptured intestine in the wound. The patient was a tall, big man, aged forty-six, very muscular, and with a great deal of fat about the abdomen. He was admitted on Aug. 7th, 1879, with a large scrotal hernia of the left side; it was dull on percussion, quite without impulse, but by no means tense or tender. He had worn a truss for seven years, and on the evening of his admission, while walking home, his truss broke, and he felt his rupture come down. He was admitted six hours afterwards, complaining of pain in and distension of the abdomen, and had vomited once a little. A moderate effort at reduction was made, but without any result. He was sent to bed, and an ice-bag was applied to the tumour. Four hours later a further attempt was made, under an anæsthetic, to reduce the tumour, but in vain. The patient vomited once after the anæsthetic. There being so little tension or tenderness, and the date of the descent of the hernia being so recent, it was determined to delay operating a little longer.

At 11.45 on the following morning—that is, sixteen hours after the descent of the hernia—another brief attempt was made to reduce it, but without any result; and at 3 P.M. Mr. Adams tried taxis himself, and some portion of the tumour disappeared; there was some gurgling, and the tumour became much softer. It was ascertained afterwards that before this attempt at reduction the patient had made a vigorous effort to replace the tumour himself, seizing it with both his powerful hands, and squeezing hands and tumour together between his thighs. This probably ruptured the sac and intestine, and accounted for the gurgling and increased softness of the swelling; but no constitutional signs of the accident were evident at this time. A few hours later the abdomen became enormously distended and painful, the countenance anxious, and vomiting frequent. Mr. Adams was sent for, who operated immediately (8 P.M., twenty-six hours after the descent of the hernia).

The scrotum was distended, and showed signs of bruising. When the neck of the sac was reached, a rent in it about an inch long was found just below the external abdominal ring. The sac was laid open more freely, and a large coil of intestine was found. It was evident that it had not been very tightly strangulated, being only of a brickdust-red colour, such as the intestines in the abdominal cavity frequently present in the earlier stages of acute peritonitis. The stricture at the neck of the sac was easily reached and divided, but the intestine would not go back. On displacing (without any force being required) the piece of intestine lying at the neck of the sac, a gush of rice-water-looking fluid took place, and the intestine collapsed, and a transverse rent in the gut, nearly an inch in length, was found. The first idea in dealing with this condition was to reduce all the sound part of the intestine, and leave the torn part attached to the wound, this being considered the routine practice. In consequence, however, of the distended state of the abdomen, it was found impossible to keep the rest of the intestine within the cavity; as fast as it was returned it came bulging out again by the side of the ruptured piece. Some surgeons, Mr. Adams remarked, would probably have punctured the intestines in the abdomen, to reduce the tension, but he thought that it was by no means an absolutely safe proceeding, and, thinking that if the whole of the hernia was reduced the ring might be kept closed, he sewed up the wound in the intestine with a continued catgut suture, and replaced all the intestine. The wound in the skin was closed, and there was no difficulty in applying pressure in such a way as to keep the ring secure. The result was most satisfactory. The patient made a most perfect recovery, the only incidents in his convalescence being a blush of inflammatory redness around the crest of the ilium, and some impaction of fæces in the rectum.

The patient was discharged cured on Sept. 8th, thirty-two days after admission.

RICHMOND HOSPITAL, SURREY.

A CASE OF POISONING BY BICHROMATE OF POTASH.

(Under the care of Dr. R. ARCHER WARWICK.)

FOR the following notes we are indebted to Mr. J. T. Gadsby, house-surgeon.

In THE LANCET of Sept. 27th, Dr. Dunbar Walker, in reporting an instance of poisoning with bichromate of potash, speaks of its rarity. The following case (one of intentional poisoning) was admitted about 3.30 P.M. on Oct. 6th, 1879, about whom the following history was elicited:—

A French polisher, aged thirty-one. He had had a quarrel with his wife and some of her relations, during which he had received two black eyes. On the morning of admission he went from London (where he lived) to Richmond, whence he started across Richmond-park for Kingston. Feeling very miserable he suddenly determined to take a lump of bichromate of potash which he had in his pocket, and which is used in his trade. He said that the lump was as large as the end part of his thumb, and weighed, as nearly as he could guess, half an ounce. He broke it up with his teeth, and swallowed the fragments. After a minute or two, during which he had walked some distance, he was seized with a horrible pain in the stomach and back, which doubled him up. Then he felt giddy, fell down, and lost himself a little, but he well remembered that he began retching violently. He got up again, and tried to walk on, but was unable on account of the pain and weakness. He fell down a second time, and was vomiting as he lay, when a gentleman passed in an open carriage, and, attracted by his groans, went to him, and learning he had poisoned himself, got him into the carriage and drove him to the hospital. He was retching all the way, and vomited some greenish fluid over the side of the carriage.

When admitted he was in a collapsed state, with clammy perspiration and a very weak radial pulse. He was very pale, and, having two black eyes, his face was not a pleasing object. He was constantly retching and groaning, and complained of horrible pain in his stomach. A quantity of warm water was given him, which returned mixed with some mucus which had a slight greenish tinge. Then milk and water was given which was brought up again, curdled, and once or twice the vomit was tinged with blood. About three-quarters of an hour after admission he had a loose motion, and during the evening five or six more, two or three of which contained blood. On examination, the vomited fluid did not give the ordinary tests for a chromate, so that almost the whole of the poison in the stomach must have been rejected before admission. The motions were not examined.

During the night milk and water was allowed him. He did not sleep at all, and vomiting was very troublesome. The next day he was decidedly better. There was considerable tenderness and burning pain in the abdomen, but the vomiting,

although troublesome, was not so urgent, and the pulse was better. On 9th October, vomiting having ceased and the tenderness over the abdomen being very slight, beef-tea was allowed as well as milk. On the 10th, as the bowels had not been opened since the night after admission, a small dose of castor oil was given. On the 12th fish was allowed, and on the 14th he got up, feeling, however, very weak. The bowels not having been open again since the 10th, a black draught was ordered. On the 20th he was quite convalescent, and was discharged on the 24th.

LEEDS GENERAL INFIRMARY.

CASES OF NERVOUS DISEASE, WITH OPHTHALMOSCOPIC PHENOMENA.

FOR the notes of this interesting series of cases, commenced this week, we are indebted to Dr. E. H. Jacobs, late resident physician.

CASE 1.—*Cerebral Tumour; Optic Neuritis.*—J. B——, aged twenty-three, admitted Feb. 5th, 1878, under Dr. Heaton. His family history was good. Eight years before he had been kicked on the head, but with no apparent bad consequences. There was no history of syphilis. Four months before admission he was laid up with cough and shortness of breath, with pain in the left side; this was followed by an abscess in the thoracic wall, from which he said five pints of pus were extracted, but the incision healed in a week. For three months prior to admission he had suffered from sudden dizziness and loss of sight when he stooped, which disappeared if he stood up. He also complained of almost constant frontal headache, and had frequently vomited. Two months before he began to have an internal squint.

On admission, he was fairly nourished, looked strong, but had rather a dull expression. He complained of constant frontal headache. If he held his head down everything became dark, but his sight was good in the erect position. His tongue was protruded straight, slightly coated. He walked somewhat unsteadily, slept a good deal, and occasionally walked in his sleep. There was internal strabismus on the left side, and optic neuritis with considerable effusion. His appetite was good, bowels open. He was ordered five grains of iodide and ten grains of bromide of potassium three times a day. On the 13th he had much improved, could see even with his head down, and the headache was less severe. On the 20th there was some general weakness of the left side, and he walked with a slouching, running gait. He was discharged at his own request on March 2nd.

On April 30th he again applied for admission. He had been steadily getting worse since he left the infirmary, and said that about five weeks before he had "a bit of a stroke," and had not been able to walk since. The headache, too, was more severe. In bed he lay on his back, was very restless, kicking off the clothes, and complaining of pain in the head. There was considerable loss of power in the left arm and leg, and he could walk only if supported on both sides. There was considerable left internal strabismus. He could only count fingers at three feet. The tongue was protruded straight; appetite good, bowels regular, but he occasionally vomited. He could not feed himself; slept fairly at night.

On May 2nd he was very noisy at night; slept after a chloral draught. He was ordered fifteen grains of iodide of potassium three times a day. On the 4th he lay in a sleepy condition, but was sometimes noisy. He had great difficulty in swallowing. On the 6th the swallowing was improved, and he said he felt better. He became gradually more comatose, and died on May 12th.

Necropsy, eighteen hours after death.—Body fairly nourished. Brain: Convolutions much flattened, membranes normal; no adhesions. The right lateral ventricle contained a good deal of serum. On opening the ventricle there was seen to be a slight prominence between the corpus striatum and optic thalamus on that side. This was caused by a hard tumour, about the size of a walnut, which, apparently growing up between the two ganglia, encroached considerably on both. In the interior of the tumour was a cavity the size of a filbert, containing thick creamy pus. There was considerable softening and disintegration of the brain matter surrounding the tumour. The lungs were dark and engorged, with old pleural adhesions; liver soft and flabby, but with no trace of syphilitic disease; kidneys much congested; other organs healthy.

CASE 2.—*Cerebellar Tumour; Optic Neuritis.*—W. B——, aged seventeen, admitted Feb. 11th, 1878, under Dr. Eddison. He had had no previous illness. Six months before he began to have pains in the lumbar region and some cough. Three months ago he felt dizzy and occasionally lost his senses for a few moments, falling down, and feeling very weak afterwards. He had had some frontal headache, and was losing flesh.

On admission he was not very intelligent, but fairly nourished. He complained of symptoms as above. Pupils acted to light, but the right was slightly dilated. He could read large print. Motion of eye sluggish, but there was no strabismus. There was double optic neuritis. He was ordered eight grains of iodide and ten grains of bromide of potassium three times a day. On the 15th he still had intense frontal headache and complained of some difficulty of swallowing when lying down. He fell down on getting out of bed in the morning. On March 4th the optic effusion was increased. He walked very unsteadily. On the 9th the left eye was quite blind, and the sight of the right much impaired. He had intense vertigo on sitting up. On the 14th there was some loss of sensibility over the right side of the face. He had vomited. On the 22nd he had two attacks of loss of consciousness, "described as fainting." In the first he was pale in the face; in the second dark. He vomited frequently, and spoke indistinctly, but could protrude the tongue. The head was retracted. On April 15th he felt a little better. He was quite blind except in telling light from darkness. He heard a watch on contact with left ear, and at four inches with the right. The pain in the head was less. He was very weak, and could not sit up. On June 1st he lay quietly, but with occasional cries. His joints were very stiff, body much wasted, and the right side more than the left. He could lift his left arm, but not the right. On the 8th he became comatose; temperature 105°. He died on the 10th. The treatment consisted of increasing doses of iodide of potassium, with draughts of chloral and morphia when the pain was urgent.

Necropsy, eighteen hours after death.—Body emaciated. Bedsores on back and left hip. The cranium was extremely thin, and there was a large amount of cerebro-spinal fluid. The right side of the cerebellum was occupied by a large tumour, closely adherent to, and apparently growing from, the dura mater. The tumour did not encroach on the left side. The rest of the brain was healthy. The right lung was partially solid at the base. The other organs were healthy.

The series will be continued in a future number.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Aneurism of the Subclavian Artery treated by Amputation at the Shoulder-joint and the introduction of Needles into the Sac.

THE ordinary meeting of this Society was held on the 27th instant, J. E. Erichsen, Esq., F.R.S., President, in the chair. One paper was read—viz., a case of subclavian aneurism, in which the procedure recommended by Sir W. Fergusson—amputation at the shoulder-joint and distal ligature—was carried out; and this was followed by the introduction of needles into the sac. Mr. Heath contributed this paper, and deduced conclusions unfavourable to the operation suggested by Sir W. Fergusson, but advocated the use of needles rather than wire or horsehair to promote coagulation in the sac. Mr. Holmes, Mr. Baker, and Mr. Erichsen, however, thought that amputation in such cases was still on its trial, and Mr. Willett urged ligature of the carotid in addition to this procedure as worthy of adoption.

The following is an abstract of the paper on a "Case of Aneurism of the Subclavian Artery treated by Amputation at the Shoulder-joint and the introduction of Needles into the Sac," by Mr. CHRISTOPHER HEATH. After reviewing the recorded cases of amputation at the

shoulder-joint for aneurism of the subclavian artery, the author narrated his case:—A man, aged forty-eight, subject to fits and paralysed on the left side, was knocked down in the street on Sept. 12th, 1878, and sustained a comminuted simple fracture of the left clavicle, and had several ribs broken, including, as was found afterwards, the first rib. The patient was admitted into University College Hospital for treatment, and was made an out-patient Sept. 29th. He was re-admitted on Oct. 31st on account of a pulsating swelling occupying the posterior triangle on the left side, which proved to be an aneurism of the third part of the subclavian artery. It being impossible to compress the artery between the heart and the aneurism, which rapidly increased in size, Mr. Heath amputated the paralysed arm at the shoulder-joint on Nov. 4th with antiseptic precautions, tying the axillary artery with a catgut ligature. There was secondary hæmorrhage to the extent of four ounces ten days after, when the antiseptic dressings were necessarily abandoned. The patient made a good recovery, but the effect on the aneurism, if any, was so transient as to be practically *nil*. The aneurism continuing to increase in size, a leaden shield was moulded to it for support. On two occasions a grain of ergotin was injected into the subcutaneous tissue without benefit. On Jan. 1st, 1879, Mr. Heath introduced into the sac three pairs of fine sewing needles, making each pair cross within the sac. Considerable clotting of blood took place around the needles, which were withdrawn on the fifth day. The aneurism gradually became solid, but bronchitis supervened, and the patient sank on January 18th. The post-mortem examination showed the aneurism to be cured, the sac being nearly full of dense fibrine, and communicating with the subclavian artery by a very small aperture close to the broken first rib. Mr. Heath concluded that Sir William Fergusson's suggestion of amputation at the shoulder for aneurism is not a satisfactory proceeding, and recommended the introduction of fine steel needles, as having all the advantages of wire or horsehair, with the gain of ready removal without hæmorrhage.—The PRESIDENT, in thanking the author, pointed out that two distinct points had been raised in the paper—viz. (1), as to the value of Sir W. Fergusson's operation in such cases, and (2) as to the *modus operandi* of needles or other solid substances introduced into aneurismal sacs.—Mr. HOLMES said that it must be allowed that Mr. Heath had to contend with great difficulties. At any time the treatment of subclavian aneurism was difficult, but here the vessel was probably much injured, the aneurism being apparently of traumatic origin. A few cases might be cited in which recovery had taken place, but they were mostly axillary rather than subclavian, allowing of the application of pressure on the proximal side. As to the value of Sir W. Fergusson's operation in such cases, it is quite possible that some may not be amenable to this procedure. But in Mr. Spence's case, quoted by the author, the patient lived four years after the operation. In Mr. Holden's case it was true no benefit resulted, but there was no harm done, and the patient was almost *in extremis*. Sir W. Fergusson's method allowed the surgeon to trace the vessel in the stump up to the sac and tie it there, and it was possible that this might be done with benefit in some cases. As to other measures he (Mr. Holmes), relying on Langenbeck's advocacy, had given ergotin a fair trial, but had found it utterly useless. Nor could he conceive the *rationale* of the use of ergotin, for it seemed absurd to argue from the effect of the drug on unstriped muscular fibre to its supposed effect on the walls of an aneurism. He had tried it in five or six cases. He agreed that needles were preferable to iron wire or horsehair, the use of the former of which caused the death of Mr. Moore's patient. But he had no experience on this head. Lastly, he would suggest that surgeons should not be daunted by the failures that had attended Fergusson's plan, for it gave a near access to the mouth of the sac.—Mr. WILLETT said that Mr. Holden in his case performed a preliminary ligature of the axillary artery. There was very slight loss of blood at the operation. In that case it had occurred to him (Mr. Willett) that ligature of the carotid (the aneurism was in the right subclavian), either simultaneously with the subclavian ligature or shortly after, might have been of service. In favour of this was the fact that pressure on the carotid manifestly diminished the pulsation in the aneurism, when this pulsation increased again ten days after the operation. Since then he had had under care a case much like that of Mr. Heath's. Tufnell's diet was enforced, and then the arm was firmly bandaged, a tourniquet placed on the distal side, and firm pressure applied by a shield over the aneurism. Death took place from rupture of the sac, but had this not unfortunately occurred Mr. Willett had intended to perform Fergusson's operation, and at the same time to tie the common carotid artery.—Mr. MORRANT BAKER trusted that Mr. Heath's case would not act as a discouragement to those who wish to carry out Fergusson's operation. The acute suffering experienced in these cases, and the fact that permanent good so rarely followed other measures, pointed to necessity for recourse to this operation. The traumatic origin of Mr. Heath's case, and the probability that the aneurismal swelling was mainly due to extravasated blood, made the case one which could hardly be expected to be much benefited by amputation at the shoulder. The good effects of the introduction of the needles were doubtless largely aided by the previous amputation lessening the volume of blood in the aneurism. He did not think, therefore, that there was sufficient experience upon which to say that Fergusson's operation was not justifiable in such cases.—The PRESIDENT agreed with Mr. Holmes and Mr. Baker in thinking that Fergusson's operation should not be discouraged by the results of these four cases, for the principle of the operation was physiologically and pathologically correct, and it could not be judged solely on clinical grounds. It involved the principle that if the vessel cannot be tied on the cardiac side of the aneurism, ligature on the distal side gives an opportunity for recovery. The removal of the limb restricts the flow of blood through the sac, for it does away with the need for collateral circulation. Mr. Spence's patient lived four years after the operation, and it was difficult to imagine that this did not have some influence, especially as the aneurism appeared to be one of the first or second part of the subclavian, and therefore not a favourable case for operative procedure. In Mr. Holden's case the operation was done as a *dernier ressort*. Mr. Heath had to deal in his case with an aneurism possibly of traumatic origin, associated with fractured clavicle. It seemed to partake of the character of a false circumscribed aneurism. Thus one of the four cases seemed to derive benefit; of another (Mr. Smith's) there was no evidence as to benefit or otherwise; whilst in the other two the disease had advanced so far, and the aneurism had such a very false sac, that scarcely any operation could be expected to produce any great good. These cases alone could not justify surgeons in discarding Fergusson's operation. But if had recourse to, it should be done early. For if these cases do not yield to ordinary treatment they generally become rapidly fatal, and the only chance of recovery then is to tie the artery as near to the external orifice of the sac as possible. As to introduction of foreign bodies into the sac to promote coagulation, he was of opinion that needles, which could be removed, were preferable to wire or horsehair. For in the latter cases—supposing recovery to take place—what would become of the foreign body?—Dr. ANDREW asked whether distal ligature might not in itself lead to harm. Cases occurred, especially of cerebral embolism in young people, where the obstruction of an artery is followed by the formation of an aneurism on the cardiac side of the obstruction. —Mr. HEATH was glad to hear the consensus of opinion as to the propriety of the operation, which, however, he did not think did any good in his case. Careful perusal of Mr. Spence's case showed that it had but little effect on the sac itself. In Mr. Holden's case the patient was *in extremis*, but the sac gave way; and so in Mr. H. Smith's case, where an intrathoracic portion of the aneurism ruptured. Mr. Baker had referred to a case under Mr. Hulke's care. That patient had been previously seen by Mr. H. Smith, who proposed amputation. He then came under Mr. Hulke's care at the Middlesex Hospital, where an apparent cure was effected under diet, &c. He had looked up the authorities on the subject before coming to a conclusion. He was not aware of any case where the carotid had been ligatured, except one recorded by Butcher in his Operative Surgery, where that vessel was secured by mistake. He was glad to hear that Mr. Holmes had not found any good effect from ergotin. The effect of the needles in his case was good, and had he known that the aneurism was so sacculated he should have inserted more than he did, for he thought this a procedure which might be more widely pursued. The risk of hæmorrhage from the insertion of fine needles was very slight; and the risk of the carrying any of the clot into the general circulation was no more than occurs under any form of treatment. Attempts to produce coagulation by the injection of fluids into the sac had been proved to be disastrous.

CLINICAL SOCIETY OF LONDON.

President's Address.—Subastragaloid Dislocation.—Bullet wound of Lung.—Suppurative Pyelitis treated by Incision.—Chyluria, followed by Glycosuria and Polyuria.—Test Pellets.

THE ordinary meeting of this Society was held on the 23rd inst. Dr. E. H. Greenhow, F.R.S., in the chair. After a brief address from the President, Mr. Pick read notes of a case of successful reduction of subastragaloid dislocation. The subject of bullet-wound of the lung was raised in a case communicated by Mr. Adam. A successful case of suppurative pyelitis, treated by incision, by Dr. Habershon, raised the question of the feasibility of exploratory surgical measures in cases of doubtful diagnosis of renal calculus. Dr. Habershon also communicated a case of glycosuria and polyuria following chyluria. Dr. Allen Sturge exhibited a case of Trade Neurosis.

The PRESIDENT, on taking the chair, thanked the members sincerely for his re-election, and proceeded to refer briefly to the nature of the work which it was proposed at the formation of the Society that it should undertake—a question that rarely came before them. He said: "The Clinical Society was founded for the exclusive purpose of receiving and debating reports of interesting cases, and not for that of reading any other kind of communication, however interesting or important. There are several other societies to which such papers may properly be sent; and as we have our own work cut out for us, we do not desire to intrude upon the functions or province of these societies. I think we shall do well to keep this fact always in view. Further, it was designed that the cases read before us were to be very accurately and fully reported as regards all their essential facts. There was to be—I quote almost the precise words of the original resolution passed at the meeting when the Society was founded, and afterwards incorporated in one of the laws of the Society—there was to be a complete record of the state of the patient when first seen, investigated according to the most approved clinical methods; a statement of the family and personal history of the patient, including a narrative of his present illness previous to his coming under observation; a record of the state of the patient when last seen, or, in fatal cases, a record of the post-mortem examination, together with an abstract of the progress and treatment of the case since first observed. The first Council resolved, after due deliberation, that, as a rule, ten minutes would be long enough for ordinary communications, and directed the President to stop any paper which exceeded this length, until the Society had expressed its opinion as to the propriety of the communication being continued. Almost of necessity this rule has been liberally interpreted by your Presidents, who have sometimes allowed papers which seemed very interesting to be continued beyond the fixed time. It is possible that the rule may not always have been enforced with sufficient strictness, but it has undoubtedly tended much to lead contributors of cases to condense their reports. And I may observe that it does not follow because a case as read before the Society is short, it may not, with the sanction of the Council, be amplified for publication in the Transactions. It may be most useful to detail many facts for future study and reference, which would, if read in full at a meeting, have so complicated the narrative that it would have been difficult to discuss it. If I may be permitted to offer a suggestion as to our future work, it would be to express a hope that we shall be able to devote a larger share of our attention to therapeutics. Accurate knowledge of the action of medicines is, perhaps, the greatest desideratum of the present day. This was one of the objects set before us by Sir Thomas Watson when he inaugurated the first meeting of the Society for scientific work, and I fear that the remarks which he then made are still not altogether inapplicable to medical practice. He said that it had been a lifelong wonder to him 'how vaguely, how ignorantly, how rashly drugs are often prescribed. We try this, and, not succeeding, we try that, and, baffled again, we try something else.' Now nothing would conduce more to the accuracy of therapeutics than series of cases carefully treated upon a similar plan, and brought to the test of a searching debate before this Society. Improved methods of investigating disease have given greater accuracy to diagnosis, and, mainly from the labours of our sister, the Pathological Society, our acquaintance with the effects of disease upon the organs and tissues of the sick, as seen after death, has, of late years, been greatly enlarged; but our knowledge of the precise action of drugs and other appliances for the treatment of disease still leaves much to be desired. I said last year, on taking the chair as President, what is, I believe, universally admitted, that the Society has already done good service, but I also expressed a hope that we should all of us endeavour to do still better. It is with the aim of enforcing, as far as I can, this view, that I have ventured to submit these remarks to your notice."

Mr. PICK read notes of a case of Subastragaloid Dislocation. A gentleman fell off the roof of an outhouse, and caught his foot in falling. When seen, the foot was so twisted that the sole looked outwards, whilst the astragalus formed a marked prominence below the inner malleolus beneath the tightly-stretched skin; the os calcis projected beyond the outer malleolus, and the lower end of the fibula was prominent. It seemed that the os calcis and scaphoid had been displaced outwards and backwards. Attempts at reduction under chloroform, and after division of the tendo Achillis and peronei tendons, failed. Much force was used, the foot was brought more into the natural position, but still the relative positions of the os calcis and astragalus remained unaltered. Subcutaneous injection of morphia and chloroform inhalations were had recourse to for the relief of the severe pain experienced. The next day, in consultation with Sir J. Paget, Mr. P. Hewett, Mr. Henry Lee, and Mr. Gage Brown, another attempt at reduction was made under chloroform. At Mr. Lee's suggestion a bandage was placed round the fore part of the foot, and by this means Mr. Lee made extension forwards, whilst Mr. Pick made lateral movements. The attempt was successful, and, with the exception of a superficial sloughing of skin, where it had been so much stretched, the case made an uninterrupted recovery. It is now three years since the accident, and, beyond a slight limp, there is nothing perceptible in the limb. The contour of the foot is perfect. Mr. Pick then described what he thought to have been the condition in this case. He had seen similar dislocations reduced by slight extension, but in the majority of cases reduction was very difficult, owing partly to the tibial tendons being caught behind the astragalus, but mainly to the interlocking of the bones. The foot is thus displaced backwards, and also laterally. Mr. Hancock had shown the value of forward extension, with the bones of the leg fixed, in the reduction of such dislocations.—Mr. BRYANT said this was an interesting example of a rare form of injury, and he agreed with the author as to the great difficulty of reduction in such cases. In a case he met with some time ago he concluded that the difficulty was due to the cause pointed out by Mr. Pick—viz., that the posterior edge of the astragalus was caught between the articular facets of the os calcis. It was not until he read Mr. MacCormac's paper in St. Thomas's Hospital Reports that he saw these cases of so-called "dislocation of the astragalus" in their true light. Mr. Lee's ingenious mode of reduction favoured the anatomical explanation given. — Mr. H. LEE pointed out that in literature, especially French, such dislocation was regarded as a very formidable affair, calling for amputation or excision, or the retention of a useless foot. The whole of the foot was carried outwards; the sole was turned directly outwards. He had thought much about the reasons of failure on the first attempt at reduction, and, taking this with other cases, he concluded that, with the exception of Mr. Hancock's case, the failure lay in the fact that extension had not been made in the right direction. It had been made parallel to the axis of the limb; but as there were two displacements to deal with—viz., that of the os calcis from under the astragalus, and that of the scaphoid also,—he concluded that traction of the scaphoid *forwards*, and not downwards, was the right course to pursue.—Mr. JAS. ADAMS mentioned that in the London Hospital museum there was a dried specimen showing outward dislocation of the astragalus. There was no history, but he had no doubt the foot had been amputated owing to impossibility of reduction.

Dr. HEWAN then read (for Mr. Adam) notes of a Case of Bullet-wound of the Lung, which he thought might be of interest in connexion with the case recently communicated by Surgeon-Major Alcock. In 1862 a ship's carpenter was

shot by the captain by a large Colt's revolver. The bullet entered near the left nipple, and lodged under the skin near the inner edge of the scapula, whence it was extracted. Some hæmoptysis followed, and continued for some days, but under rest, simple dressing, and sedatives, the patient was well enough to be removed at the end of the fortnight, and eventually entirely recovered.—Dr. C. T. WILLIAMS thought it remarkable that the heart was not injured. He had attributed the good results in Mr. Alcock's case to hygienic conditions, which also would have had good influence in this case.—Surgeon-Major ROBINSON said that the procedure adopted in the treatment of such injuries in the Crimean war was that of perfect rest and non-interference, precisely opposed to the frequent bleedings, &c., carried out in the Peninsular campaign and advocated by Guthrie. He recalled one case of a Crimean officer who recovered from the wound of the lung, and was sent home, when unfortunately he died from diarrhœa.—Mr. H. LEE contrasted the treatment with that in vogue in Guthrie's day, and recalled the case of an officer shot through the lung in a duel at Portsmouth, when Guthrie recommended bleeding, and Sir B. Brodie declined to interfere. The officer died. Antisepticism of course could not be carried out in such injuries.—Mr. PARKER mentioned that several cases of gunshot wound of the lung in the Franco-German war recovered. It was generally thought that the form and rapid travel of the Chassepot bullet produced a wound more approaching to an incised than a contused wound, like that which the old form of bullet made.—Dr. MAHOMED raised the question of the treatment of the pleural hæmorrhage in such cases. He remembered a case at St. Mary's Hospital where the pleura became full of blood shortly after the injury. Some days later the man had rigors, and the question of paracentesis thoracis was discussed, but not adopted. The man eventually recovered. He referred also to the case of Dr. Duncan, recently wounded near Cabul. Symptoms of pleurisy followed, but it did not appear that any operation was performed.—Surgeon-Major ROBINSON could not recall any cases of paracentesis for hæmothorax in military surgery.—Dr. HEWAN, in reply, said that the ship on which the patient was, was lying at anchor in a river of a notably malarial district. He referred to a case recently recorded in THE LANCET where a large ball, three ounces and a half in weight, penetrated the lung, was extracted, and the patient recovered.

Dr. HABERSHON read notes of a "Case of Pyelitis; discharge of pus; incision in the loin; recovery." The patient, aged twenty-eight, a carman, of phthisical stock, was admitted into Guy's Hospital on the 29th January, 1879. Four months before, he had noticed blood in the urine, and had experienced pain at the end of the penis during micturition. For some time previously he had had pain in the left arm, side, and thigh. A month later a swelling appeared in the left loin, and the severity of the pain compelled him to keep in bed. One night the swelling disappeared, and he passed about half a pint of pus with his urine, and continued passing a little pus for three or four weeks. On admission, he appeared ill and distressed, his sleep was disturbed, and movement gave pain. There was tenderness in the left loin; and dulness from the eighth rib to the crest of the ilium on this side, as well as fulness, but no defined swelling. Harsh breathing at apex of right lung, but no dulness except at the left base, where breath-sounds were absent. The urine was clear, specific gravity 1022; free from pus, blood, albumen, sugar, or phosphates; it contained a few squamous epithelial casts. Evening temperature 102°. Morphia was given to relieve pain. Diagnosis—disease of pelvis of left kidney, probably strumous; but it was doubtful whether there had been tubercular disease at the commencement, and the symptoms did not indicate calculus. On Feb. 8th six ounces of clear, light-green fluid, followed by two ounces of pus, were withdrawn by means of a fine trocar and cannula introduced between the ribs and iliac crest. The fluid had a fetid odour; it contained no urea or uric acid, nor hydatid, but pus-cells and fibrin. On the 14th the temperature was high; the tumour distinctly felt. Mr. Davies Colley made an incision under carbolic spray in the left loin, about three inches in length, just beyond the edge of the quadratus muscle. A firm thick-walled abscess was found and laid open, evacuating nearly two pints of pus. The abscess extended beneath the ribs to about the eighth rib, and downwards about two inches below the crest of the ilium, forwards to the edge of the rectus. Its walls were lined with calcareous material. A drainage tube was introduced, and the wound dressed antiseptically. Quinine was given. On March 21st temperature 102°, the wound had healed, and Mr. Colley reopened it, evacuating half an ounce of pus. From that time he continued to improve, leaving hospital on May 15th. The sinus was still left open, and he was directed to come to the hospital every third day, to have the side dressed. Dr. Habershon remarked that the family history and appearance of the patient suggested the probability of tubercular disease. It was not easy to give a decided opinion as to the cause of the hæmorrhage. The pain at the end of the penis suggested vesical irritation, as from calculus. Perhaps a calculus had blocked the ureter, and led to distension and suppuration in the pelvis of the kidney; but the alternative view of tubercular disease or caseous inflammation, followed by chronic suppurative pyelitis, was more feasible, and was borne out by the semi-calcareous state of the diseased pelvis. The relief afforded by the operation was so marked that Dr. Habershon felt sure that had it been postponed the man would soon have become exhausted, and he suggested that it might be more frequently resorted to in such cases with benefit and the saving of life. It would be well if the whole gland could be safely removed. He mentioned a case of a man who, from the age of sixteen or seventeen, suffered from periodic discharges of pus from the bladder, the discharge of pus being preceded by the formation of a large projecting sac, extending from the ribs to the iliac fossa on the right side. He lived to the age of sixty-four, dying from cancer of the remains of the kidney, and it was found after death that a calculus blocked the ureter, and that pus collected until the distension of the ureter made the passage free. In a note appended to the case that had been read, Mr. Colley states that the chambered character of the sac indicated its being an enlargement of the pelvis. The discharge continued until the end of October, and when last seen in November the wound had been healed two weeks, and no signs of any abdominal tumour remained. Mr. GOLDING BIRD endorsed Dr. Habershon's statement as to necessity for early operative interference, and further suggested that surgical aid might be had recourse to for the purpose of diagnosis. In a case under his care, with painful symptoms of prostatic and probably also renal disease, where there was a swelling in the neighbourhood of the kidney, he cut down upon that organ, and explored it thoroughly. The operation gave no relief, but it was performed only for diagnosis. When there were symptoms of calculus in the kidney, surgical aid might be called in to establish the diagnosis. It only required a simple incision, and the risk to the patient was *nil*.—Mr. WALSHAM said there was another method by which this end could be attained—viz., exploration by the whole hand in the rectum. Simon had thus detected stone in the renal pelvis. He (Mr. Walsham) had employed this method in five cases, and had easily reached the kidney. He had never found any ill result occur.—Dr. HABERSHON said there was sometimes great difficulty in distinguishing between an abscess of perinephritic character and one of pyelitic origin. The value of operation was well illustrated in the case he had brought forward.

Dr. HABERSHON also read notes of a Case of Chylous Urine after ague in India; Albuminuria; cessation of Chylous Urine, with the development of Glycosuria and Polyuria. The patient, a female aged fifty-nine, was in India from the age of two years till she was forty; then after a stay of two years in England, returned to India for ten years more. She had had twelve children, being married when she was about fifteen years of age; and at sixteen she had her first attack of ague, and afterwards had repeated attacks before she left India. For three years she noticed her urine to be white and milky-looking; this condition lasting till admission into Guy's Hospital on July 12th, 1876. The liver was enlarged. Appetite good; great thirst. Urine 1025, milky in appearance, containing both albumen and sugar. Opium and quinine were given. On July 18th the urine passed before breakfast was lighter in colour, but that passed afterwards was opaque and milky. The quantity was nearly five pints. She was placed on restricted diet, with gluten bread. The urine remained milky, but the sugar lessened. On August 7th the quantity of urine passed was four pints twelve ounces, but it was free from sugar. Various specimens of urine and of her blood were examined for filariæ, but none were found; when allowed ordinary diet the sugar returned. On September 20th there was no sugar in the urine, its sp. gr. 1020, but the sugar returned after the allowance of ordinary bread. On October 10th Mr. Higgens found opacity of the

lenses, and on the 17th performed iridectomy on the left eye. November 11th, the urine passed after breakfast became clear; 15th, it was clear, of sp. gr. 1012, free from albumen, but it contained sugar; about four and a half pints of urine were passed during the day. When the ordinary bread was allowed the sugar increased, and on Nov. 23rd the specific gravity was only 1010, but the urine still contained sugar. On Dec. 2nd she passed nine pints of urine in the twenty-four hours, clear and pale, sp. gr. 1010, free of albumen, but containing sugar. On the 19th eight pints and a half of urine, sp. gr. 1014, contained 242 grains of sugar. During the whole of January the urine was about the same, clear, eight to ten pints in quantity, sp. gr. 1010 to 1012, and it contained sugar, and on Jan. 27th there were 1800 grains of sugar found. On Feb. 5th she passed nine pints, sp. gr. 1010, and after fermentation the specific gravity was 1006, and about 730 grains of sugar. She remained in the hospital till Feb. 21st; her general health had improved, the chylous urine had ceased, the albumen had also disappeared, but the urine continued of low specific gravity, and contained sugar. This case was one of chylous or of lymphous urine, for there was spontaneous coagulation, but it was associated with glycosuria. Albumen soon disappeared, but the sugar remained. At first the sugar ceased when the diet was restricted, but it afterwards became more decided and permanent. Search was made many times for filariæ, but none could be detected in the blood after careful microscopical examinations. In recorded cases of chylous urine the condition has been referred to change in some of the lymphatic vessels connected with the kidney, but its association in this instance with glycosuria suggested the idea that both conditions, the presence of chyle and of sugar in the urine, might be referred to change in the liver. Of the hepatic disease there was no positive proof, and the connexion with the liver must be regarded as conjectural, at any rate as regards the chylous state.—Dr. PAVY said the patient had been subsequently under his care for several months. The chyluria had wholly disappeared, but she continued to suffer from a mild form of saccharine diabetes conjoined with polyuria. He had seen one or two of these cases. On putting the patient on a restricted diet, the sugar disappears, but the polyuria continues. He thought it likely that the vaso-motor paralysis, to which he attributed diabetes mellitus, might account also for this occasional conjunction with diabetes insipidus. He held that in diabetes mellitus there was vaso-motor paralysis affecting the chylopoietic viscera, so that the portal blood was not sufficiently dearterialised, and he had shown that when such was the case saccharine urine was produced. He did not think the chyluria had anything to do with the glycosuria, and he read a short note of a case where chyluria disappeared during pregnancy, but reappeared after parturition. He believed that in such cases there was an abnormal communication between the absorbents of the chylopoietic viscera and those of the renal tract. It was impossible that it should be due to connexion of absorbents with the arterial system, for the higher tension of the arteries would not allow of a flow from the absorbents into the bloodvessels. If the natural passage of the chyle were obstructed, it might find its way into the absorbents of the urinary tract; but he did not see how the liver could be concerned in it.

Dr. PAVY introduced to the notice of the Society a new form of Test for Sugar. He considered the cupric test by far the most reliable, and this view stood in accord with that which was generally entertained by analytical chemists. It had been hitherto the practice to employ the test in the form of a solution, prepared by mixing an alkaline tartrate with sulphate of copper and either potash or soda. When freshly prepared this solution fulfils all that can be desired; but there is the disadvantage belonging to it that, after being kept for some time, especially if exposed to light and air, it is liable, without the presence of sugar, to throw down a certain amount of reduced oxide on boiling, and thus possibly to mislead unless precautions are taken to provide against it. Dr. Pavy had long felt that it would be very desirable if the ingredients of the test could be incorporated and kept in a solid form; and some years ago he made a fruitless attempt to attain this object. Latterly he had given his attention afresh to the subject, and the test pellets shown were the result of this. They contained the solid ingredients of cupric test solution in a dry state, and they were brought into the condition of a coherent mass by compression. The preparation had been placed in the hands of Mr. Cooper, of Oxford-street, who most successfully met the difficulties that were unexpectedly encountered. There appeared no reason why the pellets should not keep for an indefinite time without undergoing change if preserved in a closed bottle away from moisture. In using them all that was necessary was to place one in a test-tube with about 3 cc., or rather under a drachm, of water, and to apply heat until complete solution had occurred. It formed a clear, deep-blue liquid, which actually constituted the cupric test solution. At present it was only as a qualitative test that the pellets were introduced, but there was no reason that hereafter the preparation should not be conducted with sufficient attention to accuracy of weighing to render them applicable for quantitative analysis.

MEDICAL SOCIETY OF LONDON.

A Rare Case of Aortic Disease, with absence of Arterial Pulsation.—The Treatment of Leucocythæmia.

AT the meeting of this Society on the 26th instant, Dr. Cockle, President, in the chair, proceedings commenced by the PRESIDENT reading notes of three cases under his observation. The first was one of Double Ptosis; the second and third of Cardiac Disease. The last was most anomalous. Eleven years ago Dr. Cockle, with Dr. Anstie, brought this case before the Clinical Society. The patient, a man, was then forty years of age, and presented a remarkable instance of almost total absence of sensible pulsation in all the accessible arteries. His mother had cardiac disease, and he himself had always been delicate, and for many years had palpitation of the heart. When twenty-five he had typhoid fever, followed by severe and periodic headache. In 1858 he began to suffer from attacks of giddiness. About this time he fell on the ice, striking his head violently, and from that date the headache and giddiness became constant. His habits then were not very temperate. Physical examination revealed normal area of heart's dulness and impulse; but at the sternal border of the second right interspace was a small well-defined area of dulness, where a thrilling impulse could be felt and seen. Here also a harsh systolic murmur was audible, conducted to clavicles, but not heard at apex nor in carotids. The second sound was loud and dull. A committee, consisting of Drs. J. C. B. Williams and Sanderson, reported on the case. They detected pulsation in one radial artery, and obtained a sphygmographic tracing which indicated aortic stenosis. They also detected an occasional grating bruit replacing the aortic second sound, and concluded that there was a saccular aneurism of the first part of aorta, the absence of pulsation in the arteries being attributed to narrowing or nearly complete obstruction of the aorta beyond the dilatation. For eight years out of the eleven which have since elapsed the patient has been constantly under Dr. Cockle's observation, and the view of aneurism seems no longer tenable. Pulsation can now occasionally be detected in the radial and crural arteries. A loud diastolic murmur has developed, and the systolic bruit is now audible in the carotids. There is also evidence of dilated hypertrophy of the left ventricle. The headaches have ceased, but he is subject to attacks of giddiness and faintness, and has a tendency to bronchial catarrh. Dr. Mahomed had obtained sphygmographic tracings indicative of aortic stenosis, without any evidence of dilatation. Dr. Cockle remarked on the singular fact of the long-delayed appearance of ventricular enlargement, and said that a defect in both irides went to support the view of some congenital malformation.—Dr. GOWERS remarked that but little was known of aneurism complicated with stenosis of the aorta, which may probably have a conservative effect.—Dr. ROUTH said that several years ago he saw a similar case following acute rheumatism. There were presystolic and diastolic murmurs varying with position.—Dr. SYMES THOMPSON referred to effect of exercise in developing murmurs.—Dr. CRISP mentioned a case he had published forty years ago, where arteritis led to gangrene. Amputation was performed without the need of the tourniquet. A short time since he saw the patient again, and pulsation could then be detected in the arteries.—Dr. DOWSE suggested that the patient might have had an aneurism, the sac of which had

become spontaneously filled up. He had seen a case where pulsation, which had been visible over a large area, had disappeared, and where life was prolonged to old age. After death the aorta was found to be nearly blocked up, only a channel being left.

Dr. ALFRED CARPENTER then read a paper on the Treatment of Leucocythæmia. The author pointed out that there was something wanting in the present plan of dealing with therapeutics, inasmuch as members of the medical profession are continually trying processes for the cure of diseases which have been shown to be useless, and that text-books continue to recommend medicines which have never done any good. He then gave the history in general terms of two cases of leucocythæmia which he had met with in private practice, and in which there were singular symptoms, one being associated with intense neuralgia, the other with recurring priapism. The neuralgic case was treated by means of iron, stimulants, and narcotics. In the opinion of the author the remedies only increased the intensity of the pain. He always found that the internal as well as the cutaneous administration of narcotics left the patient more sensitive after the effect of the dose had disappeared, that they were useless in arresting the course of the disease. He entered a protest against the cutaneous administration of narcotics as only another form of intoxication, and he objected to medical men making themselves parties to so reprehensible a practice. He had found iron and stimulants unable to arrest the course of leucocythæmia, and he urged that their use was only a waste of time. The second case was treated by means of bromide of potassium, iron, quinine, and turpentine. The priapism had recurred at regular intervals for some time; it had not been controlled by any of the ordinary remedies used, but it seemed to be mastered by the use of galvanism. He deduced five points as worthy of record, and which the author considered to be in a great measure proved by the results of this case (fortified as they were by his experience in the treatment of others). Point 1 was that bromide of potassium did not arrest the course of the disease, and had no effect upon the enlargement of the spleen in this disease. Point 2, that quinine did not have any beneficial effect in leucocythæmia, and it seemed by this result to separate the disease entirely from those affections of the spleen which are associated with malaria; that even in the large doses which were given for nineteen days—viz., twenty-grain doses three times daily—there was no reduction of temperature and no decided alteration in the course which the disease took, the daily rise of temperature being the same as before quinine was administered. The 3rd point, that the hæmorrhagic tendency (which is one of the symptoms of the disease) was not in any way arrested by the use of perchloride of iron. Point 4 was shown in the inability of turpentine to stay its progress, and which seemed to show that iron and turpentine would be beneficial in those cases in which the blood had not altered from its natural state, but that both were useless in conditions such as arose in leucocythæmia. The 5th point was that aperients were worse than useless. The author concluded by pointing out the possible connexion between the disease and eczema. All the cases he had met with had been preceded by that disease, and he asked members of the Society to give a good trial to arsenic in any cases which might come to their notice, and to publish the result, but not to waste their energies in using bromides, quinine, salicin, iron, turpentine, stimulants, or narcotics.—The PRESIDENT, in thanking Dr. Carpenter, mentioned a case which came under his care at the Royal Free Hospital. At first the signs of disease were not well marked, but after a few weeks the spleen began to enlarge, and rapid wasting set in. The patient left the hospital, and died ten days after. Oxide of silver was the only remedy that appeared to do any good in this case. The leucocytes in the blood were in the proportion of about one in ten of the red corpuscles.—Dr. GOWERS considered the great lesson taught by Dr. Carpenter's paper was the hopelessness of the treatment at present adopted in the later stages of this disease. He thought that the priapism in the second case was malarial, coming on as it did every three days. He believed that leucocythæmia is often due to malarial influences, and that the influence need not be recent. Quinine is useless when the disease is far advanced; but in the earlier stages it should always be given. Enlargement of the spleen could be reduced by galvanism. He had also seen much good done by arsenic at the commencement of the disease, but when much enlargement of the spleen had taken place this remedy was of no use. He thought Dr. Carpenter's observation about purgation was most valuable. It was considered that constipation congested the spleen, whereas the author had shown in his paper that purgation was prejudicial in leucocythæmia.—Sir W. GULL said he had come to learn, and not to discuss this question. However, he had seen a good many cases of leucocythæmia and their treatment, and he thought that miasmatic influences were potent agents in producing the disease. The case which he saw with Dr. Carpenter was a severe one. One peculiarity was the large size of the leucocytes, which were in the proportion of one to thirty of the hæmocytes, and varied in size from $\frac{1}{1000}$ to $\frac{1}{2000}$ of an inch. There was also splenitis and capsular mischief, and diseased kidneys. In these cases early recognition was most important, if the treatment is to succeed. Iron, quinine, and arsenic are the best remedies that can be used.—Dr. CRISP referred to enlargement of the liver as being a very important feature in these cases. In one case, where the spleen weighed 9 lb., the liver was also much enlarged. In another case he had seen—of a young man—leucocythæmia came on after violent exercise, and terminated fatally in a year. Both spleen and liver were enlarged. He believed that intermittent and violent exercise may produce this disease; and stated that he had examined the spleen in 130 London cab-horses, and in many of them there was great enlargement of this organ.—Sir W. GULL stated that there was malaria all over London, and he would like all these patients to take both quinine and arsenic.—Dr. CARPENTER, in reply, said that in his second case, although there was no definite history of malaria, yet he thought it might have had some share, for the patient had travelled through a malarial district in America, and had also lived in Lambeth. In Case 1 he thought there was more mental than malarial influence at work. In Case 2 the spleen weighed nine pounds, and the liver was about double its usual size. He could not approve of quinine in the later stages of the disease, but arsenic might be useful. He hoped that the Society would organise some plan for thoroughly testing certain remedies in this disease.

EPIDEMIOLOGICAL SOCIETY.

Relapsing Fever of India.—Epidemic Diseases in Man and Animals.

AT the meeting of this Society held at University College, Gower-street, on Wednesday, Jan. 7th (President, Sir Joseph Fayrer, K.C.S.I., M.D., F.R.S.), two papers were read. The first was by Dr. NORMAN CHEVERS, entitled "Notes on the Relapsing Fever of India," of which the following is an abstract:—Relapsing fever, having been recognised in Europe in 1842, was first distinctly observed and described in India by Dr. Robert Lyall, in 1852–53. Our knowledge of the disease, however, enables us to perceive that very extensive and destructive epidemics of Indian relapsing fever occurred in the North-West Provinces in 1816 and 1836. In giving histories of these epidemics, the author remarked that it is particularly noteworthy that the first visitation of Pali plague prevailed in Western India from 1815 to 1819, and that the outbreak of relapsing fever in 1816, described by Mr. Jameson, occurred in the Upper Provinces only a few months previous to the commencement in Lower Bengal of the great cholera epidemic of 1817. So also, when, in 1836, the Pali plague, commencing in Marwar, spread rapidly and attacked thirty-two villages of Meywar, a destructive epidemic, which must have been relapsing fever, made its first appearance in the town of Bareilly, and committed serious ravages in Mynpaorie and in the districts round Delhi. The history of the outbreak of relapsing fever in 1852–53 in the Yusufzie Valley, situated about forty miles from Peshawur, was then given from Dr. Lyall's narrative. In this epidemic were displayed all the most distinctive characteristics of the relapsing fever in India, which, unlike the cognate disease of Europe, is very destructive of life—an extremely prevalent and fatal epidemic or endemic fever, arising among the poor and starved, and spreading to the well-to-do inhabitants by force of its contagiousness. The tendency to relapse is very marked, convalescence is tardy, there is generally jaundice, and

quinine has no specific power as an antidote to the fever-poison. Dr. Joseph Ewart, who was the first person who recognised the existence of true enteric fever in India in 1855, noticed what he considered to be some cases of relapsing fever in Upper India at about the same time. Several years, however, had still to elapse before the occurrence of relapsing fever in the gaols of Upper India was generally suspected. A very destructive contagious fever appeared in the Central Gaol at Agra in 1860, and was described by Dr. Walker. It again prevailed in a very deadly form in the Agra gaol in 1864, and in Etah; and the following year it appeared in the gaols of Umballah, Futtehghur, Allyghur, Jypore, Malwar, &c. It was described by the several reporters as true typhus, contagious fever, typhoid fever, and, in the words of the sanitary report, "some again believe it to be identical with the relapsing fever of Europe." Dr. Gray, Dr. Beatson, and Dr. Dallas clearly recognised this disease, as it occurred at Agra, Lahore, and Umballah, as relapsing fever. The whole question was most fully and ably reviewed by Dr. David Boyes Smith in the *Indian Medical Gazette* for 1867 and 1868, and, although his verdict met with a good deal of opposition (especially from the medical side of the Indian Sanitary Commission), he brought forward very strong arguments in favour of the opinion that the contagious fever of the up-country gaols was nearly identical with the relapsing fever of Ireland, Scotland, Germany, and America. Indeed, the Sanitary Commission went so far as to admit that the disease resembles the famine fever of Europe in many important particulars. The history of the outbreak of relapsing fever, which commenced in Bombay in April, 1877, was then given from the reports of Drs. Hunter and H. Vandyke Carter, and many facts were brought forward in support of the argument that, although relapsing fever has not appeared in Lower Bengal of late years, that country was subject to its ravages up to and beyond the end of the last century.

In the second paper, "Remarks on Epidemic Diseases, in Men and Animals, in the Colony of Natal," by Surgeon-General Ross, C.I.E., the author, after describing the geographical position of the colony of Natal, pointed out that the inhabitants of the colony, at the close of 1878, are believed to have numbered 22,654 whites and 302,558 natives, 12,000 being natives of India. The area in square miles is stated to be 21,150, giving 1·07 whites and 14·7 blacks to the square mile. With so recent a history of colonisation (between twenty and thirty years), and with such a sparse population, no occurrence of epidemics would be anticipated. The climate of the colony has proved exceedingly healthy for men, women, and children; it is therefore an anomaly that, with such a healthy climate for whites and blacks, the country should be so unhealthy and so subject to disease and epidemics among animals. Cholera has never been known; small-pox only once caused a few cases on the Zulu border of the colony. During 1878 there was a small outbreak of typhoid among the residents of Durban, due to defective conservancy arrangements and imperfect water-supply, and a few scattered cases occurred during the first half of 1879. Typhoid fever was the principal if not the only disease which affected the troops during the recent campaign in Zululand. The disease which affected the troops shut up in Ekowe the Medical Department classifies as typho-malarial, being a fever of malarial type with rose spots and well-marked lesions of Peyer's glands. There are probably two forms of typhoid fever, the one, which might be called European, arising solely from sewage contamination; the other, or more eastern type—prevalent perhaps in certain latitudes where there is the same type of fever—more due to climatic than filth causes. Horses and mules are affected by horse sickness, which is described as anthrax fever resulting from the action of a poisonous agent ingested with the food, impairing vitality, and inducing a morbid state of the system, with congestive inflammation of the lungs and often external tumours. It is believed to be identical with the "poodianah disease" of India, and to be due to some poison in the grass of certain lands, probably parasitic fungi. Horses are also liable to a form of diarrhœa popularly known as "squitters." The diseases of oxen are "lung sickness," "red water," and "quarter evil." The first of these is identical with pleuro-pneumonia; it occurs all over the colony, is worse in some parts than in others, and is not affected by climate. "Red water," or hæmo-albuminuria, is a blood affection attended with more or less derangement of kidney, liver, and stomach. It lasts for five or six days, and is most fatal and prevalent after the rains of early summer. It is said to be due (1) to feeding on grass containing an excess of water, or on grass containing parasites or fungi, and (2) to bad drinking water. "Quarter evil" is a species of malignant anthrax affecting the legs and hams. Sheep suffer from "heart water," a disease in which there is fever and effusion into the serous cavities, and is said to be caused by bad pasturage, dry rearing, &c.

In the discussion which followed the reading of the two papers Sir Joseph Fayrer, Surgeon-General Ewart, Inspector-General Lawson, Dr. Buchanan, Dr. Greenfield, Mr. Netten Radcliffe, and Dr. Thorne took part.

Reviews and Notices of Books.

The Royal London Ophthalmic Hospital Reports. Edited by J. HUTCHINSON. Part III., Vol. IX. December, 1879.—Amongst the original contributions in this part are:—A Series of Groups of Amaurosis, being a continuation of a previous paper by Mr. Hutchinson. The groups here given comprise neuritis after otorrhœa; amaurosis after injuries of the head or of the fifth nerve; optic neuritis from unascertained causes and from renal disease; progressive amaurosis, with atrophy of the optic discs, following intemperance in wine, tobacco, or sexual indulgence, or accompanying old age, or resulting from embolism, lead-poisoning, and other causes. This paper is illustrated by a large number of cases drawn from Mr. Hutchinson's own experience. Dr. Renton gives a case of Enucleation for Sympathetic Ophthalmia. Dr. Landolt contributes a good paper on Myopia, which he defines to be "the sign of a disproportion between the refractive power and the length of the eye." Hirschberg, of Berlin, describes various refraction-ophthalmoscopes. He approves of oblique reflectors. The most important paper, however, is by Dr. W. A. Brailey, the Curator of the Museum of the Moorfields Hospital, on the Pathology of Increased Tension. This embraces the consideration of no less than 149 cases in which the tension of the eye was accurately determined and recorded at the time of excision. Dr. Brailey notes that in almost all the cases of pure glaucoma a most important change is observable in some or all of the bloodvessels of the interior of the eye, which consists in a great enlargement of their calibre accompanied by thinning of their walls. This condition is chiefly observed in the vessels of the ciliary region and affects the arteries more than the veins. It appears to precede the atrophy of the ciliary muscle which is present in advanced glaucoma. Dr. Brailey finds that in almost all cases of glaucoma, with increased tension, the periphery of the iris is applied to the adjacent corneal margin, and the applied base of the iris generally presents some slight inflammatory appearances. The canal of Schlemm was completely closed in 50 cases, barely visible in 61, of moderate size in 39, large in 19, and the general conditions were such that it could rarely act as a means of escape for the fluids of the eye. No changes of importance were noted in the retina, nor in the choroid or sclerotic. The vitreous was often discoloured, and contained more fluid than usual. In a second group of cases, in which the glaucoma originated in some injury or attack of disease, the same alterations of the principal tissues and membranes of the eye were observed as in pure glaucoma. The conditions present in isolated cases of glaucoma, [associated with intraocular tumours, are next detailed, and Dr. Brailey describes a fourth group originating in irido-cyclitis, and a fifth where glaucoma followed corneal staphyloma. This paper does great credit to Dr. Brailey, and contains] the results of a large amount of patient microscopical work on an obscure subject. The last article in the number is by Priestley Smith on Bilateral Deviations of the Eye.

Annals of Chemical Medicine, including the Application of Chemistry to Physiology, Pathology, Therapeutics, Pharmacy, Toxicology and Hygiene. Edited by J. L. W. THUDICHUM, M.D., F.R.C.P. Vol. I. London: Longmans, Green, and Co.—The first volume of the new periodical which Dr. Thudichum proposes to issue for the purpose of advancing the sciences which are fully enumerated on the title-page, has remained some time on our hands. As, however, the materials of which it is composed have already appeared in "various repertories of original information," and so have been brought under the notice of the profession, we make no apology for the delay. The title of Dr. Thudichum's new work is unfortunately misleading; for the profession will be led to suppose that it embraces contributions from the foremost labourers in the field of medical chemistry at home and abroad; whilst, in reality, this volume is, as far as we are able to judge, filled with contributions by the editor which have appeared in the "Reports of the Medical Officer of the Privy Council, 1866, 1876," "Reports of the Medical Officer of the Local Government Board, 1876 to 1879," "Journal of the Chemical Society," &c. The explanation of this exclusion of fellow-workers is indeed apparent from the preface. "There are professed physiologists in this country and abroad, who though very imperfectly acquainted with either the theory or practice of chemistry, have nevertheless affected to speak as persons having well-founded convictions on the subject; with their pretended convictions, however, resting on no better basis than the haphazard opinion of some professed chemist or other, or the conceited and sensational papers which, in chemistry as elsewhere, are written for mere claptrap and without research. Among the professed chemists there has sometimes been equal absence of knowledge, but in such cases, as a rule, more discretion. Nevertheless, men of externally high position have persistently done all they could—sometimes by silence, sometimes by innuendo, sometimes by obstruction—to thwart the endeavours which others have made to advance medical science by original chemical researches." In short, till professed physiologists and chemists educate themselves to the high standard indicated by Dr. Thudichum, their contributions will not, it seems, be deemed worthy the pages of the "Annals of Chemical Medicine." Although unsupported through the unworthiness of the teachers of the day, we hope Dr. Thudichum will not despair, but will continue to fill the pages of his periodical with his own researches, even though he has to act as his own editor.

Skin Diseases, including their Definition, Symptoms, Diagnosis, Prognosis, Morbid Anatomy, and Treatment: A Manual for Students and Practitioners. By MALCOLM MORRIS, Joint Lecturer on Dermatology at St. Mary's Hospital Medical School, &c. Smith, Elder, and Co. 1879.—Mr. Malcolm Morris has lately added another to the now numerous existing manuals of skin diseases. We shall not here discuss the utility of the multiplication of such text-books, because we recognise in the fact the growing attention paid of late years to this much neglected branch of medicine, and a proof of the increased number of workers in this field. This manual originated in the notes arranged for Mr. Morris's lectures at St. Mary's Hospital Medical School, and his object has been, not to interfere with or attract from the study of more elaborate works, but to present to the student with limited time and to the busy practitioner a more condensed account concisely written and arranged according to an easily intelligible method. Mr. Morris divides skin diseases into two great sections—viz., diseases of the skin proper, and diseases of the appendages of the skin; and then proceeds to subdivide into classes and subclasses, according to Hebra's method mainly, modified in some respects by the adoption of Dr. Bulkley's views, such as the dissociation of zoster from herpes febrilis and preputialis, and its arrangement under the neuroses. Syphilis is considered in connexion with the exanthems. The anatomy of the skin is illustrated by, amongst others, some of Klein's figures, but is briefly considered, and the physiology very briefly. A useful and concise chapter on morbid anatomy follows, and then Mr. Morris proceeds to discuss the subclass of exudations induced by contagion much more fully than is usual in a work of this kind, not limiting himself to a description of the skin phenomena, their diagnosis and morbid anatomy, but introducing, for instance, the prognosis and treatment, and discussing the differences between the throat lesions in diphtheria, tonsillitis, and herpetic sore-throat. We are inclined to think this a mistake. In the remaining bulk of the manual the views set forth are mainly those of Hebra and Hutchinson. The danger in such books is to become sketchy in the attempt to be simple and brief and not to overload the subject with details, and a further danger lies in not adjusting the consideration of each subject in proportion to its relative importance. We think Mr. Morris has not completely escaped either of these dangers; the definitions of disease appear to us to be often unsatisfactory, and the suggestions for treatment meagre and frequently by no means showing a hopeful spirit. Having made these criticisms, we must add that the book is clearly and concisely written, and the subject handled in a way calculated to be readily intelligible to students. The type is excellent, the work neatly got up and of a convenient size, and the manual ought to be very useful for the purpose for which it is intended.

A Manual of the Practice of Surgery. By W. FAIRLIE CLARKE, M.D. Oxon., F.R.C.S., late Assistant-Surgeon to Charing-cross Hospital. Third Edition, revised, enlarged, and illustrated by 190 engravings. London: Henry Renshaw. 1880.—The third edition of this, the smallest of the English manuals of surgery, shows signs of many improvements upon the former ones. The descriptions of many diseases are, however, defective. Thus, on turning to the chapter on Constitutional Syphilis, we find no mention of gummata, nor any reference to the special changes in the teeth and cornea so often met with in congenital syphilis. The order in which the subjects are treated also detracts from the value of the book; injuries, diseases, inflammations, and tumours follow in the oddest manner, while the text is not characterised by that masterly grasp of the subject, that power of sketching broad general outlines and principles in a few words, or of grouping and classification, which makes some small books invaluable to students.

Atlas of Skin Diseases. By LOUIS A. DUHRING, M.D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, &c. Part VI. J. B. Lippincott and Co. 1879.—This part contains four plates—viz., of Syphiloderma (pustulosum), Erythema Nodosum, Seborrhœa, and Eczema (papulosum). The high expectations raised by the earlier parts of this atlas continue to be abundantly satisfied, and there is certainly no falling off either in the care with which the subjects have been selected or in the beautiful execution of the chromo-lithography. Dr. Duhring's efforts in this Atlas have been crowned with great success, and he is giving us portrayals of skin diseases by far the most truthful that have yet appeared.

Anatomography, or Graphic Anatomy. By WILLIAM DARLING, M.D., F.R.C.S. Eng., Professor of Anatomy in the University of New York.—These tables are intended to assist the student to remember the many anatomical details gathered from books and dissection. Experience alone will fully test their value, but there is the fact that such synopses are of but little use unless drawn up by students themselves.

THE LANCET.

LONDON: SATURDAY, JANUARY 31, 1880.

STRANGE and painful as have been the incidents attending the retirement of Dr. FARR from the position of chief of the Statistical Department of the General Register Office—a contingent result of the resignation of Major GRAHAM as Registrar-General,—good may come out of evil if such changes should now be made in the Statistical Office as are necessary to facilitate the establishment of a central consolidated department of public health. We are not prepared to recommend or to fall in with the suggestion that the administration of the Health Acts, together with *all* vital affairs, should be concentrated under the ægis of the Local Government Board. So far as we can form an opinion from the general working of the department just mentioned, it has already as much to do as it can well manage; and unless it is once for all conceded that State Medicine is never to grow out of or to be rescued from the toils of parochial medicine, there can be little of hope in a policy which entrusts the practical control of health throughout the country to the keeping of a department which so persistently defers to local influences as does the Board of Local Government at Whitehall. In short, we have scant confidence in the organisation which has been created by the amalgamation of the old Poor-law Board with the central registry of local Acts, and we doubt whether it can ever be reasonably expected to discharge the functions of a State Department, considering its inherent constitution and the heterogeneous elements whereof it is composed. Added to this last-mentioned fact is the political circumstance that, however greatly the Local Government Board may be strengthened and developed by the right honourable gentleman who now occupies the office of President, or by his successors, a department of the Administration originated as this has been must long, if not permanently, remain subordinated to the Privy Council, and that august body is quite sure to interpose with its veto, or conflicting authority, in any critical conjuncture—for example, the sudden appearance of an extensive epidemic, whether newly imported or resuscitated from the buried, but not devitalised, débris of some old contagion. We must face the awkward fact that in spite of the most adroit piecing together and cementing, the Local Government Board is a composite body, made not developed, and while it would on many accounts seem natural to bring the machinery of vital statistics into the closest practicable relations with any executive by which the health of the population is to be promoted and human life prolonged, we are not, as we have said, prepared to think the amalgamation to which recent rumours point as the most judicious or promising that might be devised.

The need of the country is a Ministry of Public Health, with a *political* head, who shall have a seat in the Cabinet and a voice in the Government, more particularly now that health is justly deemed to be paramount among the factors of public prosperity. We oppose the project of instituting a *medical* Minister of Health on grounds in strict harmony with those on which we have condemned the proposal to place a layman in the chair of the Medical Council. Any Minister of Public Health should be competent to treat measures for promoting the physical welfare of the people as integral parts of the State policy—as a whole. The Medical Council must, on the other hand, be wholly medical in its instincts and proclivities, or it can never fulfil the primary purpose of legislating *for* the profession. The Council stands in the same relation to the medical profession as the amalgamated board of the Inns of Court bears to the profession of Law. It would be monstrous to place a layman at the head of the lawyers, and it would be equally absurd to appoint a lay president to the Medical Council. Meanwhile public health is an affair of State in which the medical profession has only a limited interest. We may advise, but it is impossible to assume that those who are authorities on the question of scientific expediency are equally well informed on subjects of political economy. Nothing can be gained by claiming more for Medicine or medical men than is their due. It is not our function to make laws, but the best interests of the country require that Medicine should have a voice in the highest counsels of the nation, and this condition of public prosperity will not, we are convinced, be satisfied until a political Minister of Public Health is appointed.

The intimation that the new Registrar-General is to be placed under the superintendence of the Local Government Board by a special provision is not one which ought to be allowed to pass without discussion; but in its present vague shape we scarcely know what opinion to form as to the proposal. If it be the fact, as alleged, that Mr. SCLATER-BOOTH has in view the ultimate erection of his department into a Government of Health, he will do wisely to lay aside some of the bâtons he has been previously induced to wield, while taking in hand new and important duties. It is the local element in the Board we fear. That has been the source of weakness and confusion heretofore. No Administration in affairs of sanitary policy can hope to reconcile the narrow interests of localities with the broad exigencies of national health. Many able men have been misled by the notion that because the health of the population seems to be an aggregation of the healths of individuals, therefore a sound sanitary policy may grow out of the successful working of local Health Acts. This fallacious method of reasoning will, it is to be feared, be confirmed, rather than corrected, by the official cognisance of such returns as are made to, and such impressions as are commonly drawn by, the Registrar-General. Members of our profession who have given any serious attention to the subject will not need to be reminded that every county and district in the kingdom may be able to show a low death-rate, while the population, as a whole, is neglected in its vital Health interests, and left wholly unprepared to cope with any invasions of disease. In short, the Registrar-General's Returns may supply a good indication of the variations in local health, but they can never serve the more important purposes of a barometer of national health vicissitudes. We see much reason to dread the increased use of vital statistics at Whitehall, unless the returns which are included under that designation are

viewed from a standpoint, and subjected to a scrutiny, from which they have never been regarded or examined before. If the "transfer"—for such it seems, although it is, in fact, only carrying out an old and almost forgotten arrangement—should be effected, as rumour says it will be, we can only hope the returns will be made to, and their practical value estimated by, the Medical Department of the Local Government Board, rather than directly from the Registrar-General to the chief; in the latter case, and in proportion as they are held to indicate the measure of local success in self-government, they will assuredly mislead

THE part played by schools, particularly Board, National, and other schools of the same class, in the dissemination of infection, is only now beginning to be apprehended by any considerable proportion of the population. For some time medical officers of health have been urging that the assembling together of children in schools constitutes one of the most formidable sources of those local outbreaks of the infectious diseases of children, and particularly of scarlet fever and diphtheria, which we have too frequently to record; and the official inquiries of the medical inspectors of the Local Government Board as regards certain of these outbreaks, would appear to show that this view is not exaggerated. It can be readily understood how the conditions of school life are peculiarly favourable to the transmission of infectious diseases, whether the infection be conveyed from an individual in the early stage of a spreading disease, or from the infected clothes of children coming from a house where infection exists. It can, moreover, be as readily understood how in the first instance a consideration of this sort could not be expected to influence (even if it had been present to their minds) the promoters of compulsory education, in view of the difficulties they had to contend with in securing the primary objects at which they aimed. But now that preliminary difficulties have been overcome, and the organisation for a general education of the young of the population is now fairly in operation, the time seems to have arrived when the question of infection in relation to school attendance should receive serious attention. There can be no wish, even on the part of the most enthusiastic supporter of education, that our schools, while serving their primary object, should serve also as breading-grounds for infectious diseases. But that they constitute such breeding-grounds there seems no sort of doubt. We must be careful, however, not to exaggerate this incidental evil of school attendance, and particularly not to take extravagant views of what may be required to obviate the evil. We cannot be too solicitous that whatever is done to this end should be done on obvious necessity, and so as to disturb as little as possible the ordinary course of education. There is not wanting a good deal of experience on this subject, throwing important light upon our present needs with regard to it. When the sanitary authority and the managers of schools work cordially together, no difficulty has been experienced in closing or otherwise regulating the management of a school, so as to exercise a most important influence in limiting the spread of serious infectious disease among the young. On the other hand, where cordial relations have not existed between the sanitary authority and the school managers, the school has too commonly remained a hotbed of contagion. It may be taken that where school managers will it, there is no real difficulty in preventing the school becoming a centre of infection; but, on the other hand, it must be confessed that the interest of all connected with the management of a school is so adverse to any interruption of its proceedings, that a ready acquiescence in plans designed to control the spread of infectious disease cannot, as a rule, be anticipated. The Education Department of the Privy Council Office could probably do much to facilitate action on the part of managers and teachers by obviating certain difficulties in detail. It ought to be possible so to devise regulations that acts required to be done for the public good should not have to be performed at the cost—that is to say, at the direct loss—of either managers or teachers, which unfortunately is too generally the case now. Nor ought it to be required of school inspectors that they shall secure the attendance of children at schools irrespective of the fact that they may come from families in which infectious disease is existing at the time. But, much as may be done by amendments of detail in the regulations of the Education Department, this would not suffice to remove the cardinal difficulty which arises when the managers of a school are unwilling to meet the requirements of the sanitary authority in face of an extending epidemic. What some managers find it possible to do in such circumstances without serious detriment to their schools, all may find possible; and it is becoming more and more obvious that it will be necessary for the Legislature to take some measures for overcoming the unwilling by imposing duties on school managers, in relation to infectious diseases and to the sanitary authorities, which do not now exist. The Legislature has already admitted the necessity of this in principle, for last session it passed certain local Acts (Derby, for example) which gave the sanitary authority power to close temporarily or suspend the operations of private or public day-schools in neighbourhoods threatened or affected with infectious diseases. What the Legislature has here permitted for local purposes requires to be included in the general Acts affecting the public health of the whole kingdom.

THE frequency with which retinal changes are found in kidney disease has been variously stated by different authorities. Earlier statistics were based on affection of vision, and the frequency assigned was altogether too low, while some ophthalmic surgeons, seeing cases only in which sight was impaired, have thought that retinal changes were almost invariable. WAGNER found albuminuric retinitis in 9 per cent. of the cases, GALEZOWSKY in 33 per cent., and LAUDOUZY in almost every case. It is, however, well known that the frequency with which retinal changes occur varies much in different forms of kidney disease, and it is, therefore, desirable that in observations which are made, the forms of kidney disease should be distinguished. This has been done by Mr. EALES, of Birmingham, who in an interesting communication to the current number of the *Birmingham Medical Review*, has described an investigation of the state of the retina in one hundred cases of granular kidney, the primary object being to determine the percentage of cases in which retinal changes are present. For the

diagnosis of the renal disease in every case Dr. SAUNDBY was responsible. The results contained confirm nearly the statement of GALEZOWSKY, alterations being found in one-third of the cases. They confirm also the fallacy of taking sight as the test of retinal integrity. In forty-six cases inquiries were made as to the state of vision before atropine was instilled; in twenty-eight of these complaint of bad sight was made, but in only six (that is, a little more than one in five) could any obvious abnormal condition be discovered in the retina; while in eighteen persons, who stated that their sight was good, retinal changes, such as specks, were found in five. The frequency with which considerable retinal changes do not materially impair sight is shown by six cases in which vision was carefully ascertained by test-types and lenses, and found, even with dilated pupils, to be nearly normal, and yet in all considerable changes were found in the retina.

The number of cases in which some abnormal change was found in the retina was twenty-eight, in twelve of which the changes existed in both eyes, while in sixteen they existed in one eye only. Observers have usually described the changes as bilateral, and Mr. EALES thinks that his observations can only be reconciled with those of others by supposing that the affection often attacks one eye before the other, and that it gets well in one eye before the other. In the twelve cases in which changes were found in both eyes, four had diffuse retinitis, with "fibrinous" patches and œdema, and also whitish glistening patches; one had diffuse retinitis in one eye, with only one hæmorrhage in the other eye; five had many whitish round patches, "of the atrophic kind," and two had only similar small patches. Of the sixteen cases in which changes were found only in one eye, in six several white round patches were found, in five one or two spots only; in one there was a single hæmorrhage near the disc; in two a few black specks were found, associated in one case with white specks, the black being in the centre of the white speck. In addition to these twenty-eight cases of retinal change, three others presented slight changes in the papilla, commencing or subsiding neuritis. In fourteen cases opacity of the lens existed, double and incipient in eleven cases, single in three cases. The presence of these alterations bore some relation to the amount of albumen in the urine, and one in every two patients with constipated bowels presented retinal changes, while such changes were found only in one in every six with open bowels.

WE have already noted the general statistical results of the official Report recently issued on the Health of the Navy for 1878. We have now to notice certain particulars in which this report differs from previous reports on the subject, and which, we fear, will detract much from its interest. The Report, prepared by Fleet-Surgeon J. N. DICK, R.N., has been subjected to the pruning scissors of the Parliamentary Committee on Official Statistics, and it is issued with an abridged letter-press, condensed tables (and, as we have already had occasion to point out, tables insufficient both in number and arrangement to admit of a comparison of results for a series of years), and without any original papers which it had become customary to attach to it. It is true that a sort of promise is given that papers of the class referred to may be printed from time to time in a separate volume, but this is a poor consolation to those who have become habituated to look for them; and the reason given for their excision—namely, that they were out of place in a report of this description—does not mend the matter. For it was obviously a convenient mode in which to give selected papers annually to the medical officers of the navy and to the public. Moreover, there were special reasons why original papers relating to the "fever," which disabled so many men in the navy as well as in the army at the time of the occupation of Cyprus, should have been included in this report. Even the summary account of this "fever" proves how desirable it would be to have had the observations on which they are founded published early in detail. The account is as follows:—

The fever which made its appearance in the Mediterranean Fleet at Cyprus, in the month of July, was remittent with certain peculiarities, and almost identical with that which prevailed at Besika Bay and on the coast of Syria in 1876-77. Cyprus, with a somewhat similar climate to that of Syria, has a geological formation of limestone rising in the centre of the island to a great height, with spurs running down towards the sea; the soil of the intervening ravines and plains is composed of a sandy loam, with strata of marine shells, which crop out at various parts of the island; in some places the soil is dry to the depth of ten or twelve feet, but in others water is found near the surface, with here and there beds of water-worn pebbles. Some of these plains are reported to be malarious, more especially as the sea level is approached, not altogether on account of their less elevated position, but also from the surface-drainage of the irrigated lands collecting the malaria in its downward progress. In the higher parts of the island the water was found to be good, and if conveyed in proper pipes to the various towns on the shore and elsewhere, it is unlikely that fever would result from its use. In the absence of such pipes it would appear to be unsuitable for drinking or culinary purposes.

The outbreak of the disease was preceded by a few cases of sunstroke and solar febricula. The first case of fever appeared on July 16th at Larnaca. In typical cases the general symptoms were shortly as follows: rigors accompanied by mental depression, lassitude, headache, and pains in the trunk and limbs; the face was flushed, eyes suffused, and the temperature suddenly rose to 104° or 105°, with a pulse of 120, and a coated tongue, which soon became brown and dry in the centre; in some instances nausea and vomiting proved troublesome. These symptoms, with exacerbations and remissions, increased more or less rapidly, according to the severity of the attack, and culminated in profuse perspiration or diarrhœa, the temperature falling, and the patient being left in a debilitated condition. The tendency to irregular relapses was very marked.

The number of cases of remittent fever contracted by the fleet at Cyprus exceeded 360.

THE death is announced (by telegraph) of Dr. George Gibson, of Jamaica, which took place on the 21st inst., by a fall from his horse. Deceased was a graduate in Medicine of the University of Dublin, and held the post of surgeon to the Royal Naval Hospital at Port Royal.

Annotations.

"Ne quid nimis."

THE BARNARD DAVIS COLLECTION.

THE Hunterian Museum of the Royal College of Surgeons of England is about to receive an important addition to its treasures. For more than fifty years Dr. Barnard Davis, a physician residing at Shelton, in Staffordshire, has been accumulating a rich collection of crania and skeletons, illustrating all the varieties in the human species found in every known part of the world. He has exhumed the barrows of the early inhabitants of our own island, and carefully preserved the osseous remains found in them. He has begged and bought from travellers and collectors from every clime, from Greenland to Patagonia in the New World, from Siberia to Tasmania in the Old. From the various islands of the Pacific specimens were obtained before the aboriginal people were either destroyed or modified by new ways of life introduced by the English settlers. Though, from the accident of its local position, this collection was personally known to few, its fame has been spread far and wide by the excellent descriptive catalogue which its possessor has published, a work of great labour, containing detailed measurements of upwards of 1800 specimens.

As the owner of this valuable collection is now advanced in years, some anxiety has naturally been felt as to its future destiny, as the progress of the science it illustrates is greatly concerned in its being kept intact, and placed in circumstances which will render it available to those who are working at the subject. It has also naturally been felt that it is desirable that it should be retained in this country, as the specimens in it are eminently illustrative of the ethnology of the British Isles and of its colonies and foreign possessions, and have nearly all been collected by British explorers and travellers. In almost every other country the duty and expense of acquiring and preserving such a collection would be looked upon as an affair of the Government, as all the great collections of similar nature on the Continent are maintained at the public expense; but the College of Surgeons having voluntarily, when it took charge of the Hunterian collection, taken upon itself to maintain an anatomical museum, which in extent, arrangement, and facilities afforded for public inspection and study is truly national, has acted in this matter in the same spirit in which it has always fulfilled its trust. To obviate any chance of the collection being lost to English science, the Council of the College and Dr. Barnard Davis have, by an arrangement creditable to the liberality of both, agreed to its transfer to the Museum of the former in Lincoln's-inn-fields. It will probably be some time before the whole of such an extensive series of specimens can be moved and arranged in its new locality; but we trust that the indefatigable Conservator, Professor Flower, will before the year is over be able to announce that we have at last in London an anthropological collection scarcely, if at all, equalled in extent, in richness, and in variety by any in the world. At the present moment Mr. Flower is superintending the packing of the collection for removal to the Museum of the College of Surgeons.

THE TRANSMISSION OF SCARLET FEVER BY MILK.

A REPORT has been issued by the Local Government Board on a sudden outbreak of scarlet fever at Fallowfield, near Manchester. The outbreak included thirty-five persons, belonging to eighteen families, and of the individuals who suffered not less than twenty-four were attacked within thirty-six hours, between Sunday morning, August 3rd, and Monday evening, August 4th. Dr. Airy was directed by the Local Government Board to investigate this outbreak, and the results of his investigation are given in the report now before us. The outbreak was quite local, and the different details elicited tended to the general result that the infection had been distributed to the families through the agency of a particular milk-supply. The facts bearing on this point do not well admit of any other interpretation. The question of the mode in which the milk could have become infected was not so fully cleared up, but it is shown that one of the milkers on the dairy farm lodged in a farm-house where scarlet fever was present at the time when the milk presumably became infected, and it is suggested that the infection was communicated to the milk, in some way undetermined but not inconceivable, through his agency. The report throughout is of very considerable interest, and forms an important contribution to our knowledge of the *mechanism*, if we may so write, of certain of the observed phenomena marking the progress of infectious diseases.

ROYAL UNIVERSITY OF IRELAND.

THE Charter of the new University in Ireland, which received the Royal Assent last August, has now been published. Its provisions are briefly as follows:—The Senate will consist of the Chancellor and not more than thirty-six members, all of whom are appointed by the Crown, and these, along with the graduates, will form the Corporation; whilst the Vice-Chancellor will be a member of the Senate elected by them, will hold office for three years, and will be eligible for re-election. Convocation consists of the Senate of the University and of registered male graduates of two years' standing; and the members of Convocation of the Queen's University in Ireland at the date of the charter may become members of the latter on making application and complying with the prescribed conditions, whilst all the graduates and matriculated students of the Queen's University in Ireland are secured corresponding rank and standing in the Royal University. All degrees except those in Theology may be conferred by the University, also on men who have distinguished themselves in science or literature or in the public service. Matriculation in the Royal University, compliance with the necessary conditions, and passing the prescribed examinations, entitle any student, male or female, to a degree; no residence in a college nor attendance at lectures being obligatory except for a degree in medicine or surgery. The examiners will be appointed by the Senate, also a Secretary and Registrar; whilst visitors will in due course be appointed by the Crown.

A CHINESE "HYGEIOPOLIS."

DR. RICHARDSON has been anticipated in one of his most brilliant exercitations for the promotion of public health; nay, more, he has not merely been anticipated, but, strange to say, while he was contented to picture forth a possible hygienic elysium for the edification and emulation of longing occidentals—an elysium which had no trace of Boards, local or general, and which was purged of contentious chemists and sanitarians — an "Hygeiopolis" was actually in existence. Of course, as our readers will surmise, there is but one part of the world where this could happen, a part sufficiently remote to exonerate Dr. Richardson from blame in not knowing the fact—the land of the Princess Badoura, the land of Aladdin—China, to wit. The "Hygeiopolis" in question is Wen-chow, a newly-opened port on the east coast, and its discoverer is Dr. W. Wykeham Myers, surgeon to H.B.M.'s Consulate, Takow, Formosa, and to H.M.S. *Centaur*. This gentleman assisted at the "occupation" by the officials which marked the opening of the new port, and in a detailed account of Wen-chow, which he has com-

municated to the *Japan Mail*, he boldly and graphically parallels the place with Dr. Richardson's "Hygeiopolis," as he gathers that sanitary ideal from our pages in October, 1875. He is not prepared to say that the parallel is perfect, but he observes, "the similarity is close enough (especially when associated with our preconceived ideas of the existing state of matters in China) to warrant my alluding to even this high standard." All the main and pleasant features of "Hygeiopolis" above-ground are to be found in Wen-chow. We shall not follow Dr. Wykeham Myers in the different items of his comparison. We feel too humiliated to learn that the irrepressible Chinese should, even in the remotest fashion, have outstripped us in our public-health courses; and even the hygienic shortcomings in Wen-chow indicated by Dr. Myers afford but scanty consolation, for whatever these shortcomings may be, Dr. Myers states that he was "surprised at noticing the more than passing resemblance presented by Wen-chow" to Dr. Richardson's ideal. It seems to us that this resemblance leaves no choice to the Health Section of the Social Science Association but to visit Wen-chow, with Dr. Richardson as president.

DR. ANDREW DUNCAN.

THE latest intelligence with regard to the condition of Dr. Andrew Duncan reports that he had safely reached Lahore. During the march, however, from Cabul the front wound reopened and discharged a quantity of unhealthy pus. At Lahore the wound was examined by Professor Lawrie, who extracted five pieces of cloth. Professor Lawrie's opinion is that the bullet went round between two ribs, grazing the pleura and diaphragm; the rib in front had also been broken. It is, however, satisfactory to learn that since his arrival and sojourn in the warmer climate of Lahore he has made rapid progress towards recovery, and hopes, instead of being obliged to take three months' leave, to go again to the front early in February. For this purpose he has applied for the vacant surgeoncy of the 23rd Pioneers, and which no doubt he will obtain. At the same time we cannot help expressing a regret that Dr. Duncan's talents should be wasted in the performance of regimental duties. Dr. Duncan made his mark in London whilst at St. Mary's Hospital as a teacher of Surgical Pathology and Histology, and we venture to think the Indian Government would act wisely in securing his services as a teacher for the Bombay or Calcutta Colleges.

VACCINATION IN QUEENSLAND.

"AN OLD PRACTITIONER," writing to the *Queenslander*, gives a curious account of the state of vaccination in the colony. He affirms, as matter of common notoriety, that the practice of vaccination there has fallen into disuse, "the difficulties attending the operation being nearly insuperable." There is, it appears, no vaccine institution, the rooms formerly used for the purpose having been annexed by the Museum. The supply of lymph for the colony is usually obtained from vessels arriving with immigrants, and is often unreliable after a long voyage. When vaccination has been started, the greatest difficulty is met in maintaining it from the irregularity of attendance of mothers, and their unwillingness to have their children's arms operated on. Moreover, the summer of the colony is, "An Old Practitioner" avers, too hot to admit of the operation being successful, and the winter too dry! What then, he asks, is to be done? To which he answers, "Let well alone." In other words, small-pox for Brisbane is a foreign disease, and has not been known in the colony, according to this gentleman's statement, for the last fifty years. The quarantine arrangements may be relied upon to keep it out, if their strictness is not meddled with. Moreover, if by chance small-pox should get into the colony, have we not heifers? and cannot we readily cultivate lymph to any required amount by retro-vaccination?

There is an easy-going ring about "An Old Practitioner's" letter which strikes us with astonishment. It is difficult to enter into the feelings of colonists with whom an evil so familiar in the old country as small-pox is simply a matter of hearsay. Nevertheless, we question the prudence of "An Old Practitioner's" advice, and demur to the difficulties he asserts as accompanying the operation of successful vaccination in Queensland. If the maritime commerce of Queensland augments as its colonists hope, the time will come when quarantine will prove a very fallacious protection against small-pox; if small-pox once gets among its imperfectly protected population in an active form, no retro-vaccination will probably furnish lymph in quantities sufficient to enable the authorities to overtake the disease, and, even if it did, the organisation to use that lymph effectually will be wanting. In view of the terrible results which too often accompany the progress of small-pox among populations partly or wholly unprotected by vaccination, Queensland would do well to place her public vaccination arrangements upon a sound basis, and endeavour to carry out systematically and continuously the vaccination of her people. Vaccination, to be done effectually, must be done carefully, slowly, and regularly. Vaccination, in face of a small-pox epidemic, is too commonly frustrated by the hurried and inconsiderate way in which it is put into operation.

DR. GERRARD-SMALL, OF ROME.

THE *malesuada fames* (the "hunger, counseller of ill"), has prompted the Italian proletariat to many deeds of violence, but to none so dastardly as that which has just been perpetrated on Dr. Thomas Gerrard-Small, for wellnigh fifty years the physician of the Anglo-American colony, resident or migratory, in Rome. Dr. Gerrard-Small has lately been living in honoured retirement in the Via Farini, one of the new streets constructed on the Esquiline, a region lonely indeed, but figuring seldom in the *cronaca nera* of the police. On the morning of the 23rd inst., in the temporary absence of his servant, two decently-dressed youths presented themselves at his door, and, saying they wanted "soldi" (sous), forced their way into the hall, and pushing the doctor into his study, threw him on the floor. Relieving him of his purse, containing 200 lire (£8) and of his keys, one of them went straight to a escritoire, where he kept his money, while the other held him down by kneeling on his stomach and clutching him forcibly by the throat. When so nearly strangled as to be speechless the ruffian next dug his fists into the doctor's eyes, to prevent him seeing the accomplice, who, finding no money in the escritoire, went from drawer to drawer in every table in the house, ransacking each and all in vain. By this time they had satisfied themselves they had got all the money accessible, while from motives of prudence they refrained from taking their victim's watch and chain or other valuables by which they could be traced, so they proceeded to bind him hand and foot with a stout cord they had brought with them, and throwing a heavy curtain over him, decamped. The doctor had lain for some time in syncope, till on coming to himself he disengaged his hands and feet, and, on his servant's return, lodged a full account of the robbery with the police. Later in the day he was visited by a medical friend and colleague, who found him much contused about the throat and face, suffering from almost complete aphonia, and still somewhat agitated. Laryngeal mischief, which at one time appeared imminent, was, however, averted, and on the last visit (the 26th inst.) the doctor was progressing favourably. Meanwhile the police, with whom Mr. Röaler Franz, the British Vice-Consul, co-operated, effectively succeeded in tracing the malefactors to one of

their haunts, and found them to be confederates of an ex-domestic of the doctor's, who had been dismissed for negligence and misconduct. From him, no doubt, the aggressors had ascertained at what hour the doctor was usually alone, and where he was in the habit of keeping his money.

THE NON-OBLIGATION OF MASTERS TO SICK SERVANTS.

WHEN there is anything like leisure to attend to domestic questions, perhaps the duty of masters to domestic servants overtaken with sickness in their service may come in for a little attention. At present the master is under no legal obligation to provide medical attendance. He may detain a servant in a state of considerable illness, and let him or her drift into an incurable state, and yet not be blamable in the event of death ensuing. A case somewhat in point has occurred at West Stockwith, Notts, in which, as alleged at the inquest, a servant was ill for eleven days and had no qualified medical attendance until within an hour of her death, when Dr. Wright was called in only to see that she was *in articulo mortis* from pneumonia. But no law has been broken. She was under the care of that class of persons whom Mr. Serjeant Simon thinks are gifted with medical inspiration. We do not say that a master should be made responsible for finding medical advice for his servant. A law to this effect would often operate harshly. But he should be responsible for seeing that some proper medical advice is got for a servant detained in his house, even if it be that supplied by the Poor Law. He is in some sense *in loco parentis*, and can only gain by a humane anxiety for his servant's interest. The barren verdict in this case was, "Died from inflammation of the lungs brought on by a cold."

THE THAMES NAVIGATION AND THE SEWAGE OUTFALLS.

THE arbitrators in this inquiry have by no means an enviable position. Engineer is being pitted against engineer, and chemist against chemist, in bewildering fashion. The inquiry, after already occupying twenty days, has been adjourned for five weeks. The Thames Conservancy has completed its case, and the Metropolitan Board of Works has now entered upon its rejoinder. The chemical evidence promises to be of exceptional interest. Professor Frankland has given evidence in favour of the view entertained by the Conservancy Board, that the banks impeding the navigation of the river off Barking and Crossness consist of sewage mud. The chemical evidence to be presented by the Board of Works will traverse this conclusion. The outer interest in this question consists in the fact that the chemists employed by the Board of Works are understood to have followed the same methods of analysis as those adopted by Dr. Frankland. Whence, then, the apparently irreconcilable difference in their conclusions? This will, no doubt, have to be made fully clear to the arbitrators, and the explanation will prove of general interest.

THE INFLUENCE OF PHOSPHORUS ON THE URINE.

A SERIES of experiments undertaken by M. Cazeneuve, the results of which have been communicated to the Académie des Sciences, seem to show that phosphorus, given in toxic doses, increases the amount of urea, of phosphoric acid, and of sulphuric acid, and also the total excretion of nitrogen and of iron. The observations were made upon dogs and cats, and the following serves as an example of the experiments. The daily excretion of a dog having been found to be about 2½ grms. of urea, ·15 grm. of phosphoric acid, ·18 grm. of chlorides, nitrogen 1·26 grm., and no iron; a centigramme of phosphorus, dissolved in oil, was injected, and in a few days the daily secretion of urea was 7½ grm., of phosphoric acid ·88 grm., of chlorides ·55 grm.; the total amount of nitrogen being 4·9 grm., and the quantity of iron appreciable. There was a trace of albumen, but no blood or bile, although urobilin was present. The excretion of each constituent gradually lessened, and bile pigment appeared in the urine. The excretion having fallen until it was considerably below the normal, 200 grms. of milk were given, which had the effect of raising the excretion of each substance almost to the point reached immediately after the phosphorus had been injected. Phosphorus is supposed, when given in toxic doses, to destroy the red blood-corpuscles, and such destruction seems to explain the change observed in the urinary secretion. Modern physiology is inclined to regard the liver as the chief seat of the formation of urea; and M. Brouardel has drawn an argument for this theory from the fatty degeneration of the liver which is produced by the administration of large doses of phosphorus. M. Cazeneuve believes that his results support this theory.

METROPOLITAN ASYLUMS BOARD.

THE report of the last fortnightly meeting of this Board contains no allusion to the expected motion of Sir Edmund H. Currie in reference to the exclusion of small-pox cases from Stockwell and Homerton Asylums. Both of these asylums are being used for fever cases, which now constitute the chief care of the Board: 223 fever cases were reported in Stockwell, of which 210 were scarlet fever, 7 enteric, and 4 typhus. In Homerton there were in all 201 cases, of which 145 were of scarlet fever, and no less than 56 enteric fever. At the Small-pox Asylums of Deptford and Fulham there were 82 cases of small-pox.

Questions of general administration came on for discussion. It transpired that very various prices for common and necessary articles of food were paid by the different asylums. Thus the article of cheese cost the Board many thousands a year, and while at one asylum 42*s.* a cwt. was considered enough, at another 60*s.* was paid. So with tea. A motion was carried referring this subject to the chairmen of the several asylum and hospital committees, with a view to co-operation and uniformity in food supplies.

TRICHINOSIS.

THE *Veterinarian* for February has a very comfortless article on trichinosis. It draws attention to the extremely small amount of knowledge we have of the extent of prevalence of trichinæ in home-fed pork, to the certainty of this form of parasite infesting largely American pork, and to the difficulty of discriminating trichinosis in man from enteric fever and acute rheumatism. From these considerations it argues that trichinosis is probably of more common occurrence among human beings in this country than has hitherto been conceived, and suggests the necessity of some steps being taken by the Government or the Legislature to ensure some greater degree of safety in this matter than now exists. Our contemporary confesses that it is much easier to advise than to act, but inertness under such circumstances is unjustifiable.

DEATH OF THE SULTAN'S SISTER.

THE *Commercial Advertiser* (Constantinople) gives particulars respecting the cause of death of her Imperial Highness Refigé Sultana, daughter of the late Sultan Abdul Medjid, and sister of the present Sultan. Born in 1842, she was married in 1857, and had one child, which died soon after birth. For several years she suffered from dropsy of the ovaries, but could not be induced to undergo the radical operation for cure, which ovariotomists in this country have made so facile and comparatively safe and famous. She would submit only to tapping. Twelve times this operation

was performed with more or less relief to the patient. After the twelfth operation it became obvious that if the radical operation were deferred much longer the patient's life would be sacrificed. She still delayed, however, notwithstanding the urgent advice of Dr. De Castro and Dr. Sarell; and on the 2nd of January grave symptoms of rapidly failing vital power supervened. In deference to her entreaties, a thirteenth tapping was performed, but it gave only a transitory relief, and she died on the 3rd. The deceased Sultana is described as having been of warm heart, very intelligent, and possessing more cultivation than commonly falls to the lot of the fair inmates of harems.

EFFECTS OF INTRAVENOUS INJECTION OF SUGAR AND GUM.

MM. R. MOUTARD-MARTIN and CH. RICHET have studied the effects of the intravenous injection of sugar and of gum, and their researches have some bearing on the physiology of the renal secretion, for on determining the blood-pressure with a hæmometer, they have ascertained that the injection of gum materially increases the blood-pressure in the arteries, raising it from 0·03 to 0·05 mm. of mercury, whilst the injection of sugar has no influence on the pressure. Here then we have two substances, of which one, sugar, causes polyuria, but has no influence on the blood-pressure; whilst the other, gum, augments the blood-pressure, but, far from producing polyuria, arrests the urinary secretion. What, then, becomes of the theory which explains the urinary secretion as a function of the blood-pressure?

AT a meeting of the members of the Liverpool Medical Institution, held Jan. 22nd, 1880, Mr. Newton, Vice-President, in the chair, it was unanimously resolved—"That this Institution desires to express its sense of the great service rendered to the country by Dr. William Farr, who, by his unrivalled abilities and long and successful work as a statist, has not only done more than any other man to stimulate our national sanitary progress, but as well to advance the study of vital statistics throughout the civilised world; and to record its surprise and regret that his paramount claims for the office of Registrar-General have been disregarded, and the post bestowed on a gentleman whose name as yet is entirely unknown to the country in connexion with statistical science."

THE Medical Superintendent of the Nottinghamshire County Lunatic Asylum has issued, with commendable promptness, his annual report for last year, showing that the institution contained 398 patients at the end of the year, an increase of eight upon the number at its commencement. The admissions during the year were 99, and the discharges 91; of the latter, 50 were deaths and 30 recoveries. With regard to the admissions, the usual complaint is made of these including so large a proportion of epileptic and harmless imbeciles from the union workhouses, who merely require the attention of a sick nurse. The recoveries were in the proportion of 30 per cent. of the admissions, including the transfers.

WE regret to learn from a correspondence in the local journals that sanitary matters are by no means in a favourable state in Chesterfield. The borough is reported to be practically without bye-laws, to have highly defective slaughter-houses, and badly ventilated sewers. Chesterfield's crooked steeple seems to beget crooked sanitary ways in its municipality.

A SOCIETY for promoting medical science by means of communications, cases, specimens, discussions, &c., has been formed in Cambridge, and is called the "Cambridge Medical Society." The meetings are to be on the first Friday in every month except September, at 3 P.M., and at 8 P.M. on alternate months. Professor Paget has been elected President, Professor Humphry Vice-President, and Dr. Creighton Secretary and Treasurer. The Society has been joined by most of the medical men in the town, and by some of those in the neighbourhood.

CHARCOT ON THE PATHOLOGICAL ANATOMY OF PULMONARY PHTHISIS.

(Concluded from p. 963, vol. ii. 1879.)

D. Specific Lesions of Propagation.—It is a fact gained by science of the present day, that tuberculous matter arrived at the stage of caseification possesses the property of propagating tubercle from place to place. It seems to be then ripe and fit for the production of seeds, which may be detached from the softened mass and be carried by the lymphatics to germinate at a greater or less distance. From this point of view tubercle is a truly malignant infecting new growth, and this property of infection has been well brought to light by the labours of Virchow, Rindfleisch, Lépine, Ponfick, and Charcot.

It is indisputable that among the tubercular lesions of phthisis there are some which should be considered as lesions of secondary origin, radiating around primary foci. Viewed in this light, tubercular lesions are often better understood as a whole, and often also their clinical interpretation gains by it. This diffusion of tuberculous matter around caseous foci takes place within very variable limits, and we may, according to M. Charcot, establish three stages in it: local or direct infection; infection at a greater or less distance by the lymphatic vessels; and, lastly, generalised infection, dissemination of the grey granulation throughout the whole organism. The grey granulation is, in fact, the form taken by tuberculous matter emanating from caseous foci.

Professor Lépine has insisted, and rightly, on local infection by simple contact. If the pleura covering a tuberculous lung be examined, tubercles will be seen to be propagated there, in what manner will be stated later. This is what is seen. The visceral pleura is studded with grey granulations, which have not, however, excited any reactionary process in their vicinity; no false membranes are to be found at their level, no adhesions with the subjacent parenchyma. But if the parietal pleura of the part immediately corresponding to the granulations on the opposite layer be examined, columnar masses of superficial granulations will be found on it. Their development evidently results from contact with the primary focus; there are no traces of tubercle on the parietal layer, except in places corresponding to the tubercles on the visceral layer. But the development of the secondary granulations does not take place solely from immediate contact; it seems as if the seeds emanating from the principal focus have been sown to a certain extent in all parts of the pleural cavity. These secondary, erratic tubercles are found especially in the neighbourhood of the tendinous leaflets of the diaphragm, around which they form crowns, the subpleural lymphatics being very superficial there (Bizzozero), and presenting stomata. However that may be, it is not unreasonable to admit that the process in the pulmonary parenchyma is much the same as that in the pleura; that a certain number of the granulations there seen are produced through direct contact of the granulations with the constituent elements of the organ, and in that way the marked confluence of the granulations in certain parts may be explained.

Infection by lymphatics, if the disposition of the lymphatic system as described by Grancher be borne in mind, will readily account for the propagation of granulations in all parts of the parenchyma in the visceral layer of the pleura, and in the tracheo-bronchial glands. Tracheo-bronchial adenopathy is very common in tuberculous children. Parrot has said that these glandular lesions are all consecutive to lesions of the pulmonary parenchyma, only at a more advanced stage. This relation is established by the lymphatic paths, and the lymphatic may

often be traced, if a superficial focus be in question, as a nodular cord connecting the primary pulmonary focus and the secondary glandular focus. Histological analysis enables two distinct elements to be distinguished—(1) the lymphatic channel, generally filled with leucocytes in a state of granulo-fatty degeneration, or with caseous detritus proceeding possibly from the focus; (2) nodules or swellings at different distances, which are simple or compound tuberculous granulations. The lymphatic gland itself also contains a number of grey granulations, remarkable, as Schüppel has well shown, for the predominance of giant-cells; they are seated in the follicles of the gland. The nodules may be readily studied in another episode of pulmonary phthisis. If a tuberculous ulcer of the bronchial mucous membrane be examined, there is seen under the muscular coat a stellate cavity containing a tuberculous granulation and endothelium; it is a lymphatic the calibre of which is narrowed by a tuberculous nodule, proceeding from the primary focus, arrested in it. The nodule may become in its turn the point of departure of secondary nodules by direct infection of the neighbouring tissue. In that case it attacks lymphatic capillaries hollowed out in the connective tissue without distinct walls. But the same disposition is met with in lymphatics of a more complex organisation; for instance, tuberculous lymphangitis of the lacteals, which convey, as Cornil has demonstrated, tubercles from intestinal ulcers to mesenteric glands.

The lymphatic system may be invaded in its whole extent up to its entrance into the circulatory system. Ponfick has lately recognised in the thoracic duct traces of the passage of tuberculous material. There, too, these traces consist in the presence, at intervals, of small nodosities, which are no other than granulations developed in the wall of the vessel. In these cases there was generalised tuberculosis. It is well to bring into prominence these phenomena of propagation, for hereby tubercles diverge from simple inflammatory products and approximate to the malignant new growths.

E. We have seen that everything is explicable without the intervention of phlegmasia of the pulmonary tissue. This phlegmasia does certainly take a share in the tuberculous process; but to what extent and how does it intervene? "Tubercle, it has been said, determines the nosological species, but the pneumonia which succeeds it constitutes the gravest lesion of tuberculosis; it determines the acute or the chronic form. It is this which governs the general state, which determines the fever; it is this which produces cavities. In pneumonia lies all the danger of phthisis; it is this which must be arrested and combated." In other words, predominance of pneumonic lesions—passivity of tuberculous lesions. M. Charcot declares that for many organs these propositions are exaggerated, that for others they are absolutely false.

The main process of lung destruction is, in the majority of cases, independent of pneumonia. Further, whilst recognising the importance of the pneumonic element in phthisis, and that phthisical people may die from the occurrence of pneumonia, M. Charcot is of opinion that this latter event is rare; that, as a rule, the process of destruction and the chief symptoms of phthisis are independent of the pneumonic element; that, in fine, this element may be wanting throughout the whole evolution of the phthisis.

It should here be remembered that tubercle is always *sui generis;* but that, according to circumstances, it offers anatomical varieties in relation to its tendencies of evolution. Thus at the two extremes of the series are found on one side tubercles ending rapidly in caseification, on the other tubercles of fibrous evolution; and the causes of these modifications should be sought in the tubercle itself, and not in the pneumonia that often accompanies it.

What are the forms of pneumonia which are associated with the tuberculous neoplasm to form pulmonary phthisis? Lobar pneumonia must be excluded. This variety may doubtless be associated with tubercle, but in a transitory way, and, so to speak, clinically. It is different with broncho-pneumonia. It is this which forms the second element already pointed out by Cruveilhier; acute in acute tuberculosis, chronic in the slow tuberculous evolution. There is nothing peculiar about these forms of broncho-pneumonia associated with the tuberculous process. In the acute form are found characteristic fibrinous or purulent masses with the lesions of splenisation; in the chronic form, carnification and all varieties of metamorphosis of the alveolar contents. These contents may present granulo-fatty degeneration, but here the mass of degenerated epithelium remains in some sort free in the alveolar cavity, whilst it may be remarked in passing that the caseous metamorphosis which attacks the embryonic tissue of the tuberculous neoplasia fuses into one mass the contents and walls of the alveolus.

If we do not rest contented with such generalities, but enter into the detail of the clinical forms of pulmonary tuberculosis, we shall perceive better how much the *rôle* of pneumonia has been exaggerated. Acute granular phthisis occurs under two principal forms—a slow *apyrexial* form, where the granulations accumulate in successive crops, or which is only manifest by asphyxia, and kills by asphyxia (post-mortem examination reveals no pneumonia, which clinical study could not otherwise explain); a *pyrexial* form, especially notable for its very grave general symptoms, consisting in a typhoid state and a kind of hæmorrhagic diathesis. In view of this pyrexia the defenders of pneumonia triumph, and MM. Hérard and Cornil, for instance, maintain that the pyrexial phenomena are due to pneumonia. Unfortunately for this theory pneumonia is often absent at the autopsy. Thus, while M. Charcot was delivering these lectures, M. Landouzy communicated to him two cases of acute pyrexial phthisis which occurred in two young girls, who succumbed about the fifteenth day of a disease during which the stethoscopic signs had been absolutely negative, whilst the temperature oscillated between 39° and 41° C. Nor at the autopsy was pneumonia demonstrated. Here and there were a few trivial epithelial changes, but no trace of fibrinous or purulent exudation. Thus, then, in this form of pulmonary tuberculosis pneumonia is often wanting, and these general symptoms can and should be explained otherwise than by a concomitant pneumonia.

What now can be said about so-called acute pneumonic phthisis, which is the clinical counterpart of broncho-pneumonia? When the patients succumb after a duration of the disease of about one or two months, it is very certain, as we have already seen, that there will be found, in addition to tubercles, the lesions of catarrhal pneumonia. Hérard and Cornil do not hesitate to relate the symptoms of evolution, especially the fever, to this broncho-pneumonic element. But it would be necessary that a precise relation should exist between the extent of the pneumonic change and the intensity of the general symptoms. Now, when these cases are carefully read, it will be seen to be not so; that the general state is proportionate to the extent, not of a few broncho-pneumonic nodules scattered here and there, but of the caseous masses; and there is no need to demonstrate here that these masses are tubercular and not pneumonic foci. In a fair number of cases, it must indeed be said that the general state appears connected with other conditions more or less determined. So here also the pneumonia is accessory.

In subacute phthisis—so-called galloping phthisis—the process is destructive *par excellence*, and rapidly ends in the formation of cavities. At the autopsy the lungs appear stuffed with tubercles so confluent that their mass takes the aspect of a lobar pneumonia; at the apex, and slightly in all parts, the tissue is already hollowed into cavities. It may be said that in some cases there is no pulmonary tissue intervening between the tubercles, and consequently no place for the development of an inflammatory process of any value.

It must be added that, in a general way, it is especially at the period of tuberculous disintegration, of the formation of cavities, that grave general symptoms, the *summum* of fever, are produced. The same remarks are still more applicable, if it be possible, to the evolution of chronic phthisis, discrete or diffuse, which is only differentiated from subacute phthisis by a slower course. Catarrhal pneumonia may intervene, but its *rôle* is always effaced. From the first period the fever is marked by evening exacerbations, which, moreover, do not reach 39° C. (Williams); and it is certain, as Sidney Ringer has shown, that this fever may exist before any local symptoms. At other times the fever falls—disappears nearly completely during the full morbid evolution. Is it possible to invoke pneumonia here? At the period of softening characterised by moist crepitation and the expectoration of elastic fibres there is doubtless fever with nocturnal exacerbation, which may attain 39° C. (maximum); but this fever is readily explained as a result of the resorption of the softened products. And then how account for the intervention of pneumonia in cases where fever does not exist, or to a very slight degree?

As to the production of more or less voluminous cavities,

we have seen how this is readily conceived apart from any pneumonia, and that Cruveilhier was deceived when he fancied the tubercular process incapable by itself of producing cavities, and that for this the aid of suppurative phlegmasia of the organ was necessary.

Thus, then, since recent researches have demonstrated that caseous pneumonias are not pneumonias but tubercular agglomerations, pneumonia is no other than a scarcely common complication. It often accompanies, and in variable degree, the tubercular neoplasia; but it is only an accessory element, in no way indispensable for the anatomical evolution or the interpretation of the clinical phenomena.

HEALTH OF LARGE ENGLISH TOWNS.

THIRD WEEK OF 1880.

UNDER the influence of lower temperature the recorded mortality again showed a marked increase last week. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly a third of the entire population of England and Wales, 5290 births and 3741 deaths were registered during last week. The births exceeded by 105, and the deaths by 466, the average weekly numbers during 1879. The deaths showed an increase of 257 upon those returned in the previous week; and the annual death-rate, which had been equal to 24·0 and 24·2 in the two preceding weeks, further rose last week to 26·0. The lowest death-rates last week in the twenty towns were 19·0 in Oldham, 19·2 in Sunderland, 20·6 in Sheffield, and 20·9 in Brighton. The rates in the other towns ranged upwards to 27·1 in London and Plymouth, 28·3 in Liverpool, 28·6 in Hull, 30·3 in Nottingham, and 30·7 in the city of Manchester.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 607, 541, and 518 in the three preceding weeks, rose again to 544 last week; they included 198 from whooping-cough, 145 from scarlet fever, and 129 from measles. Whooping-cough showed the largest proportional fatality in Salford, Newcastle-upon-Tyne, and London; scarlet fever in Leicester, Norwich, Bradford, and Bristol; and measles in Hull, Plymouth, Nottingham, and Leicester. Of the 17 deaths referred to diphtheria, no less than 13 were registered in London. The fatality of fever, principally enteric, was unusually small. Small-pox caused 4 more deaths in London and its outer ring of suburban districts, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 77 and 75 at the end of the two preceding weeks, rose to 84 on Saturday last; during the week 21 new cases of small-pox were admitted to these hospitals, against 30 and 8 in the two previous weeks.

The fatality of lung diseases showed a further increase, due to the severe cold. The deaths referred to diseases of the respiratory organs in London, which had been 455 and 512 in the two preceding weeks, further rose last week to 559, and exceeded the corrected weekly average by 104; 372 were referred to bronchitis, and 120 to pneumonia. The deaths referred to these diseases were equal to an annual rate of 8·0 per 1000 in London, and in Liverpool the rate from the same diseases was equal to 8·2 per 1000.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual Quarterly Court of the Directors of the above Society was held on Jan. 14th, in the rooms of the Royal Medical and Chirurgical Society. The chair was taken at 5 P.M. by the President, Sir George Burrows. One new member was elected, two sent in their resignation, and the death of one was reported. Grants, amounting to £1284 were made to fifty-nine widows, fourteen orphans, and three orphans on the Copeland Fund. Fresh applications were received on behalf of one widow and two orphans. A legacy of £500 from the executors of Miss Hurst was announced by the treasurer. The expenses of the quarter were £56 12s. On the motion of Mr. Steet it was resolved to propose to the next annual meeting an alteration in the-bye laws, to extend and define more certainly the area of the operations of the Society, by making all medical practitioners residing within a twenty-mile radius of Charing-cross eligible to become members.

Correspondence.

"Audi alteram partem."

LITHOTRITY AND THE REMOVAL OF FRAGMENTS.

To the Editor of THE LANCET.

SIR,—I have read the clinical lecture by Sir Henry Thompson on "Lithotrity at a Single Sitting" with great interest. He therein fully admits the value of the principle of rapidly removing fragments of stone after it has been attacked by the lithotrite. The recent movement to this kind of practice has been given by Dr. Bigelow, who by the adoption of his own particular method has shown the facility and safety of the plan of treatment.

I must, however, in justice to the memory of my revered master and teacher, Sir William Fergusson, call attention to the fact that many years ago he prominently referred to the importance of removing fragments from the bladder by mechanical means rather than leaving their expulsion to nature. It is true that Sir William's method of removing them was different from that practised by Dr. Bigelow and Sir Henry Thompson, but the principle inculcated—viz., that of clearing the bladder at one or two sittings—was the same. Lying before me is the volume published by Sir William Fergusson in 1867, termed "Lectures on the Progress of Anatomy and Surgery," and at page 101 will be found the following words: "It may be justly said of successful lithotrity that neither weeks nor months are long in comparison with the advantages gained; but, for the credit of surgery, it may be claimed as an advantage to do that *in a few minutes* which nature might take weeks or months to accomplish. The chief object I have in view in these remarks is to establish this practice. Supposing a stone crushed and its fragments comminuted, my proposal is, that these should be removed at the same time or as soon thereafter as may be." Sir William then goes on to describe the method he adopted, which consisted, after the stone was broken up, in removing the fragments by means of what he terms "a small lithotrite and scoop." Many years before this was written I had often assisted him in this manipulation, and I have repeatedly practised it myself with great advantage.

Whilst, however, maintaining that the object aimed at—viz., the rapid clearing of the bladder—was the same, I am willing to admit that the means adopted by Dr. Bigelow and Sir Henry Thompson are preferable; and I am sure, were Sir William Fergusson living, he would follow the same plan, for from the fervid manner in which he used to speak, both publicly and in private conversation to myself, regarding the propriety of removing fragments from the bladder, I am convinced he would have made use of any means by which this desirable object might be attained.

I am, Sir, yours, &c.,

Wimpole-street, Jan. 26th, 1880. HENRY SMITH.

THE PREVENTION OF HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—The boy alluded to in my letter of December 16th died from unmistakable hydrophobia on Dec. 18th. He was under the immediate care of Dr. Dobie, Keighley, and was seen by me with Dr. Rabagliati, of Bradford. Dr. Lauder Brunton kindly came down from London to give the benefit of his advice. The history of this boy will probably appear in the forthcoming report of the Hydrophobia Committee of the British Medical Association. In the Keighley case the saliva test was unfortunately not tried, as an accident happened to the vessels containing saliva. I quite agree with your remarks that carefully conducted experiments are necessary to test the accuracy of the suggestion I have advanced, and I trust Professor Greenfield will have an opportunity of verifying the results obtained by Reynaud. In all investigations certain conditions are necessary for success. The insertion of vaccine in some cases is not followed by the results desired. Though at Manchester the rabbits resisted the poison, this negative result may have depended on some causes which may admit of further explanation.

We cannot overlook Reynaud's evidence. In *Le Progrès Médical*, 16th November, 1879, it is stated that Reynaud not only produced rabies in rabbits by injecting the saliva of the patient who died under his care at the Lariboisière, but that he continued the chain by extirpating the submaxillary glands of the first series, and inoculating or inserting them into a second series, obtaining positive results again. What are the conditions necessary for successful inoculation? What portions of the saliva are the most virulent?—From one side of the mouth or the other? How long does the saliva possess its virulency? Is it affected by heat? These and other questions (which will suggest themselves to the mind of such an expert in the art of investigation as Professor Greenfield) require solution. The Brown Institution is the place for solving them.

Through the courtesy of the police authorities of the district I was enabled to send to Professor Greenfield, Brown Institution, the body of the dog which inflicted the injury, and which was killed on the day the boy was bitten.

Cauterisation was within a brief period resorted to in this case. A very important question springs from this, one upon which there has existed, and still exists, a great diversity of opinion—viz., as to whether cauterisation should be employed without previous suction, so as to drain off any virus and cleanse the wound. The principal objection against cauterisation is, that an encysted condition of the virus may be produced. Some of the older writers advised dilatation of the wound, and keeping it open for some time. I believe it would be better in all cases to incise the wound and draw off some blood, and then apply some caustic.

Sir Thomas Watson has cautioned the public against suction by the mouth; and though I do not agree with his opinion, yet I cannot overlook the weight which must necessarily be attached to the pronounced utterances of a physician of his eminence and experience, and I have no doubt the influence of his teaching will deter a large number from performing a humane and harmless action. Suction may be made in another way, and I submit to you a small instrument made at my suggestion by Aitkin and Co., surgical instrument makers, York. The accompanying drawing

will explain the principle of action. It is very simple, and when at hand might be usefully employed, before cauterisation. The blood will not fall back upon the wound, as it will ascend into the secondary bulb, and all risk of infection by the mouth is obviated. I intend fixing a small gutta-percha rim round the open bulb, so that the aperture will be narrowed and the air more speedily exhausted.

Preventive and preservative measures are of paramount importance in relation to hydrophobia; I trust my little contrivance may be found useful, and that its merits and defects may be freely criticised.

I remain, Sir, yours faithfully,

TH. M. DOLAN, F.R.C.S. Edin.

Horton House, Halifax, 20th Jan., 1880.

*** The instrument forwarded by Mr. Dolan appears well calculated for its object, if only it be at hand when needed. It appears also suitable for use for a similar purpose in dissecting rooms.—ED. L.

SMALL-POX AT BATH.

To the Editor of THE LANCET.

SIR,—Your article, "Small-pox at Bath," conveys a misapprehension which I hope you will allow me to remove, as far, at least, as the board of guardians is concerned. You say that the "Poor-law Guardians' Hospital, a ruinous cottage adjoining the workhouse, is adapted to receive only three or four cases." This is so far true that the guardians did purchase some years ago a cottage near the workhouse in order that any sporadic case of infectious disease, whether occurring within the house or brought in from the outside, could be at once isolated; but this was, of course, totally inadequate for use (except in special cases) for the present epidemic, which (as far as the guardians are concerned) has been dealt with in a large-hearted and practical way. Last year, upon my representation, a new wing containing three wards was built by the board for the accommodation of female venereal cases and "offensive sick." This wing was finished and about to be occupied when, more cases of small-pox being sent in than the cottage could accommodate, a committee of the board consulted me, and at once decided on devoting this wing exclusively to small-pox cases. On the male side a corresponding wing was utilised for men. These wings are continuous with, but quite separate from, the other sick wards, and the cases are admitted from the outside without passing through any part of the house.

As you will see by the enclosed report adopted at their last meeting, the Board do not consider (as I do not myself) that any arrangement which brings a formidable epidemic into close proximity with 700 persons is a satisfactory one, and they strongly object to pauperising many whom they feel should not have been sent to the workhouse at all; but difficulties existing as to their joint action with the Town Council in the matter, they have simply, in the face of a sudden and difficult emergency, done their best to meet it. Although the Board requires no eulogium from me, yet I can truly say from twenty-five years' experience of them, that no exertion on their part is at any time wanting to provide all the accommodation &c. possible for the sick poor, and I have never yet made a suggestion or expressed a wish in connexion with my duties that has not been most attentively considered, even if circumstances prevented its being completely carried out.

I am, Sir, yours obediently,

ROBERT BIGGS, M.R.C.S.E., L.S.A.,
Medical Officer to Bath Workhouse.

Frith-street, Bath, Jan. 22nd, 1880.

To the Editor of THE LANCET.

SIR,—Your edition of the 17th inst. contained a short paragraph headed "Small-pox at Bath," which you state is founded on information "from Bath." Had this paragraph appeared in a less widely circulated or less influential journal than THE LANCET, I should have treated it with contempt, and possibly informed the Editor that he had been made the innocent victim of a mendacious hoax. As Medical Officer of Health for the city of Bath, and also in my private capacity as a citizen of this well-abused city, I solemnly declare that the information you have received on the subject is untrue and groundless.

I shall briefly take, *seriatim*, the charges brought against the Sanitary Authority and the Poor-law Guardians of Bath by your *mis*-informant—

1st. That "hospital provision for infectious disease is *lamentably* insufficient, and is equally unavailing for averting disease and for providing for suffering." Both assertions are untrue. As officer of health, I have the supervision of the removal of all such cases, in conjunction with the sanitary inspector, and up to the present date the hospital accommodation afforded by the sanitary authority and by the Poor-law authorities has been not only sufficient for the emergency, but positively has never been completely occupied. The sanitary authority, in addition to their hospital, erected an additional auxiliary hospital, which as yet has been unoccupied. To relieve the pressure put on the Poor-law authorities, by the great number of admissions to the union hospital, the sanitary authority have had conferred upon them, by the Town Council as urban sanitary authority, power to erect still further accommodation, and thus enable them more fully to give admission to others than those of the *non*-pauper class. I would fain hope that this wise precaution may prove almost unnecessary, as symptoms of subsidence of the outbreak are beginning to show themselves. The arrest of the disease has been proved by its comparative limitation.

2nd. As to the character, position, and local circumstances of the "villa" turned into an excellent hospital, your correspondent must be either ignorant or misinformed. This building, purchased, with the ground adjoining, some years

since by the sanitary authority at a considerable price, and transformed into a hospital at considerable outlay, is situated on a flat table-land about two miles from Bath. The approach is certainly up-hill, but as good a road as any in England. This hospital, capable of containing about fifteen patients, is completely sheltered from the cold north winds by a noble belt of trees. The view is scarcely to be surpassed in England. There could be no more favourable spot whereon to build a hospital or sanatorium.

3rd. I again assert that even this hospital has never been completely full.

4th. I have no doubt that the medical officer of the workhouse hospital can give an equally satisfactory refutation of your informant's assertions regarding the workhouse hospital accommodation.

In support of my own assertions I beg to forward a local paper containing my annual report; and I will conclude with a request, or I may say a challenge, to your informant if he lives in Bath, to call upon me any day, and I shall be happy to hear his reasons for making unfounded assertions, equally injurious to the interests of the city and to the public character of those who have done and are doing everything possible to arrest the increase of a much exaggerated outbreak of disease.

I remain, Sir, yours faithfully,

A. B. BRABAZON, M.D.,
Medical Officer of Health, Bath.

*** We propose to print the portion of Dr. Brabazon's annual report referring to the subject under consideration, and a report adopted by the Board of Guardians on the same subject, with which Mr. Biggs has favoured us, in our next impression, pressure upon our space preventing us giving place to them this week. We may state, however, that Dr. Brabazon's letter and report raise a much wider issue than we were prepared to expect, and which will receive our attention.—ED. L.

ON THE

PREVENTIVE AND REMEDIAL EFFECTS OF MOLASSES IN SCURVY AND DISEASES CONNECTED WITH CHRONIC STARVATION.

To the Editor of THE LANCET.

SIR,—As it is probable from the accounts in the daily press, that the distress now increasing in the West of Ireland may assume the proportions of a famine, or at all events such gravity that some of the diseases incidental to slow starvation may become manifest, I shall feel obliged by your giving me some little space to draw the attention of the profession, and in particular that of the Poor-law medical officers in the suffering districts, to the affections, principally of a scorbutic type, which, while acting as civil surgeon of a district containing two millions of people, during the late famine in Southern India, came under my notice, together with the powerful calorifacient, antiscorbutic, and assimilation-assisting properties of Jaggary (uncrystallised palm sugar), which is analogous in its composition and action, though differing in consistence and appearance, with the molasses or treacle with which all are so familiar in this country. The therapeutic powers of this substance I first brought to the notice of the Indian public in June, 1877, having been induced to do so from information received ten years ago, as to its efficacy, from a sea captain in Halifax, Nova Scotia, who had used it for a period of twenty years, and in whose experience, and that of many of his friends, it was more efficacious, more economical, and more palatable than lime-juice, among the substitutes for which I fail to see it mentioned either by Parkes or other writers on this subject.

Thus impressed by memory, and being surrounded by disease of a scorbutic character, though brought about by causes far removed from sea influences and salt provisions (these latter cannot be set down as causes of scurvy in the Indian famine, as the very bullocks often died from want of it, owing to the heavy salt-tax; it was due more to starvation, and to the effect of roots, nuts, wild aloe, prickly pear, and such inedible matters), I was enabled, with the permission of the late Surgeon-general of the Madras Army, Dr. Smith, and with the help of Mr. Longley, the commissioner, to introduce it into all the famine camps in his district; and later on, when its period of probation had passed, and its value became somewhat recognised, more generally among the famine-stricken people of the Madras Presidency.

In its limited, as well as in its more extended use, according to all unbiased opinion, professional and lay—amongst which I may mention the written testimony in its favour of twenty medical subordinates who served under me in the famine—it has been the means of saving numerous lives; and from its sweet and pleasant taste, independent of its more useful properties, the hour of its distribution has been the one bright spot (the plum pudding and mince pies) in the daily life of the miserable little beings who crowded the famine camps, whose careworn and aged features and emaciated frames once again, under its influence, assumed a sleek appearance, with a natural smiling and childlike aspect.

It is possible, however, that in temperate climates the diseases due to prolonged abstention from wholesome and digestible food, at a time when digestible and easily assimilated food becomes daily more desirable, may differ from what appertains in the tropics. At the same time, as far as I am aware (speaking under correction) there is no valid reason they should do so, beyond the fact that dysentery, whether in the acute or scorbutic form, and affections of the liver, are rare in higher latitudes with these exceptions. *Cæteris paribus*, there is no reason why passive dropsies and hæmorrhages, weak ulcers, joint effusions, bleeding and spongy gums, prolapsus ani, mesenteric disease and famine diarrhœa—the diarrhœa of non-assimilation, with stools resembling (but resembling only) cholera evacuations—may not prevail in Ireland as in India. On the contrary, it appears to me there are some special reasons why they should do so, which are as follows:—

The Indian meal or maize-flour and bean-meal, in common use among the Irish poor, and on which, particularly the former in times of famine, owing to the failure of the potato crop, they mainly subsist, are very similar in chemical composition and indigestibility with the cholum (Sorgum vulgare) and dholl (Cojanus indicus), dry grain largely used in India; all of which, though rich in nitrogenous and fatty matters, are indigestible and fruitful sources of diarrhœa, and are if given alone, or in any quantity, eminently unsuited to a starving individual with an impaired assimilative apparatus. And it is under such circumstances that a few ounces of molasses per diem (it is very cheap) will help digestion, and cause the absorption of food that would without its aid pass through the system unaltered, as the following experiment will show.

Experiment No. 1.—Twelve men, emaciated inmates of a relief camp, were weighed on four occasions in the space of a fortnight, their diet being principally rice, one pound and a half, with six ounces of jaggary per diem. They, with two fever-stricken exceptions, increased in weight *ab initio*, and at the end of a fortnight had almost assumed their normal state; while it was the general experience that the chronically starved lost weight for at least a week after admission, no matter how well fed, unless the sugar was given.

No. 2.—Twelve men, prisoners in gaol, not so reduced as those in No. 1, were weighed three times in a fortnight. Their diet was the ordinarily mixed full dietary of the gaol, being a mixture of rice cholum (Sorgum vulgare), with mutton and vegetables twice a week, but without the jaggary. At the end of a week five had reduced in weight, six were in the same state as on admission, one had fever, and was not noticed. At the end of a fortnight six had increased in weight, while the rest were in the same state as on admission. After this they all improved.

These experiments show clearly enough the great utility of the palm sugar, or jaggary, in helping the more weakly, emaciated, and worse-fed men to assimilate their food from the beginning, while the others, with a more varied and extensive dietary, failed to do so.

Having said so much on the value of this substance, I will not encroach on your valuable space further than to suggest that its antiscorbutic properties may in some measure be due to a partial acetous fermentation, which suggestion may possibly seem superfluous to those who remember that the universally acknowledged antiscorbutic property of the potato is due to the large quantity of sugar it contains. The physiological explanation of its property of aiding in assimilation, which I consider most important and deserving of attention, may be found in some power which

the *Sucrose* group of carbo-hydrates, so easily assimilated in themselves, and so readily convertible into fat, may possess, of retarding, arresting, and preventing those fatty degenerative changes of the intestinal mucous membrane and its glands which I as well as others have found, post mortem, as the last and most fatal pathological phenomena of chronic starvation.

As the themotic power of molasses, for similar reasons, is self-evident, it only remains for me to recommend it to the naval and merchant services, and again, in conclusion, to my professional brethren who may have the misfortune to meet with the diseases incident to famine, with the hope that it may prove as useful to my poor countrymen across the Channel as I think I have shown it to be to the people of India.

I am, Sir, yours, &c.,

D. H. CULLIMORE, F.R.C.S., M.K.Q.C.P. I.,
Late Residency Surgeon at the Court of the King of Burmah.
Connaught-square, 7th January, 1880.

"ERRONEOUS IMPRESSIONS OF PROFESSIONAL WORK."

To the Editor of THE LANCET.

SIR,—In an editorial note appended to my letter in to-day's LANCET you state that you were "not aware that the paragraph in a lay contemporary was written by Dr. Tibbits, or that he was responsible for the statement concerning electricity to which we took exception."

I beg to say that I did *not* write the paragraph in question, and that I knew nothing of it until I saw it, in common with yourself, in the ordinary course; also that I should not have troubled you with any communication had not the "statement concerning electricity" been quoted by your contemporary as an extract from the "annual report of Dr. Herbert Tibbits." I am sorry to encroach again upon your space, but your note, if uncontradicted, would convey the impression that I write upon medical subjects in the lay press, a thing I have never done and never intend to begin doing. I am, Sir, your obedient servant,

HERBERT TIBBITS.

New Cavendish-street, W., Jan. 24th, 1880.

*** If Dr. Herbert Tibbits will look again at the paragraph which appeared in a lay contemporary, he will see that the passage cited by us, and to which we took and still take grave exception, as reflecting on "the majority of the medical profession," is not stated to be an extract or distinguished by quotation marks. However, the fact that it *is* an extract does not alter our opinion of it as a reflection on the profession. The matter must now drop.—ED. L.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—If the new Naval Medical Warrant has not appeared before you receive this letter, I should feel much obliged by your publishing it.

In my opinion it cannot be too strongly impressed on the Admiralty that if the new Warrant simply gives the naval medical officers the same pay and retirement recently granted to the army surgeons, it will most certainly not induce any prudent man to enter the navy.

The Admiralty ought to seriously consider that if the Army and Navy Warrants were identical as to pay and retirement, the army medical officer in India would receive more than double the pay and allowances of the naval one on the same station, or any other station. Most persons will concede, also, that the great majority of doctors would infinitely prefer eighteen shillings a day on shore to a pound a day and the restrictions and discomforts of ship life. Under such circumstances, it requires no laboured argument to prove that if the navy desires to compete successfully, for one moment, with the army for medical candidates, the Admiralty must be prepared to offer more liberal pay and retirement than obtains in the army, and either a shorter period of service for retirement—to allow for the loss of time on compulsory half pay—or a fair portion of half-pay time to count as full-pay time. Without such concessions being granted it is perfectly idle to hope for candidates.

With regard to the question of cabins, which has been frequently discussed in THE LANCET: anyone conversant with the service will know that it is requisite for the safety of the ship that the navigating officer should have a cabin as near the upper deck as possible; but, most decidedly, with this exception, cabins ought to be "given according to relative rank"; and chaplains, who have no naval rank, preferring, for good reasons, to have none, most certainly ought not to have a cabin in preference to any other civilian, of whatever seniority or standing.

In conclusion, I think it would conduce very much to the content of the Naval Medical Department if exchanges were permitted, as in the army.

I enclose my card, and am, Sir, yours &c.,

HOPE.

INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—In your issue of November 15th, you devote a leader to the Army Medical Department. My present purpose is to solicit your powerful advocacy for the removal of some real grievances of the Indian Medical Service. To begin with, it is a strictly military service, although certain officers are lent for the performance of civil duties. Yet, although a military service, it is the only department in which staff allowances are not granted. For example, the pay of a surgeon-major above twenty years' service is 1056*r.* per mensem; this is the pay of rank. The consolidated pay laid down for charge of a regiment by an officer of this standing is 1000*r.*, such consolidated pay being actually less than the pay of rank. True, the the medical officer is not mulcted for doing work, since he is permitted to draw the pay of rank; but is it not an anomaly that consolidated pay should be fixed at a rate which is practically useless, since it is never drawn? There is no staff pay for holding charge of a regiment. An officer receives 1056*r.* while waiting for a charge, and precisely the same sum when in charge. The pensions are old-world, and out of harmony with the time; those of officers of the A.M.D., although they may serve at home or in good climates, being actually higher. Surely the man who is compelled to serve in the tropics all his time, and whose sick leave does not count towards service, should have a higher instead of a lower pension—at the very lowest £1 per diem after fifteen years' actual service. A Madras surgeon-major, in an able letter to Lord Cranbrook, treats of the past and present of the Indian Medical Service, and gives a fair estimate of its prospects. He therein clearly shows there is a "block," and conclusively proves that an immediate saving to the State of one hundred thousand per annum would result from pensioning off liberally one hundred surgeon-majors. According to his view the days of the service are numbered, and the sooner it is wound up the better. Supersession is the order of the day.

One word to intending candidates. The pay of rank of a surgeon is 286*r.* per mensem; true, a charge may be held in a year or two, but more likely for the first five years the youngster will be bucketed about from pillar to post. Now 286*r.* a month, in consequence of the depreciation of the rupee, is under £24, which is scarcely a living for a gentleman in India.

I am, Sir, yours obediently,

M. A. D.

PARIS.

(From our own Correspondent.)

M. MAGNAN commenced his course of lectures on Nervous and Mental Pathology on the 18th instant, taking Aphasia as the subject of his opening lesson. Setting aside glosso-plegia, glosso-ataxia, and other cases in which the instrument of speech is at fault, the lecturer confined his attention to the study of two forms of aphasia, depending upon disturbances occurring in the psycho-motor region of the brain. Of these, the first, verbal amnesia, would appear to result from lesions either of the third frontal convolution or of the cortical part of the insula, and the function of speech is lost because its organic substratum is destroyed. In logoplegia, on the con-

trary, the memory of words remains clear, but the subject is unable to reproduce them, and here we find that the cortex is intact, and that the disease is localised in the bundles of fibres emanating from it. An interesting variety of aphasia is word-blindness. After an attack of right paralysis, a man aged sixty-four, who was shown by the lecturer, remained aphasic, naming wrongly objects presented for his inspection. A sentence being written in large letters on the board, the patient was unable to copy it, and yet when told to write it down, the same words having been pronounced, he acquitted himself extremely well. Another man of the same age, who had also suffered from right hemiplegia, was able to make a written communication of considerable length on the state of his feelings, but was incapable of reading a single line of his own writing. The explanation of such cases was simple enough. "The encephalic centre which elaborates expression has remained intact, and the fibres which join it to the peripheral organ continue their function. If reading is impossible, it is because the graphic symbol, through some rupture in the conducting fibres, does not reach its centre, and does not there awaken a corresponding idea." It will be seen that M. Magnan is a partisan of what Brown-Sequard calls the *clavier* theory.

Surface thermometry continues to attract much attention at the medical societies. Professor Broca showed an instrument devised by Dr. Mortimer-Granville, at the Academy of Medicine, and M. Laborde made a communication relative to the same instrument to the Société de Biologie. Other thermometers, but differing little from those generally in use, have been presented to the Academy by Drs. Voisin and Colin, and a crop of observations concerning local temperatures may be predicted with confidence.

M. Briquet, a veteran in the Academy, and the author of a treatise on Hysteria which is one of the standard works on the subject, read a report which was expected to excite considerable attention. The views of an important school of neurologists were criticised somewhat sharply, especially as regards the relation between compression of the ovary and the development and arrest of the hysterical crisis. It was thought that Professor Charcot would have replied, and an interesting discussion was anticipated; but, contrary to all prevision, M. Briquet was allowed to lodge his protest without eliciting any answer from the Salpétrière physician.

Obituary.

EDWARD CATOR SEATON, M.D.

DR. SEATON was the son of a surgeon in the Naval Medical Service, who, having retired on half-pay, had settled in the town of Rochester. He received his early education there, and afterwards studied for the medical profession at Edinburgh, of which university he became a graduate.

The period of his studentship was always looked back upon with pleasure, for it was then that he formed some of his longest and most valued friendships. He was intimately associated with Dr. Allen Thomson, and was the pupil and close friend of Dr. Sharpey, to whom he was warmly attached, and to whose pleasant companionship he owed many happy hours during the last few years of his life.

After terminating his career at Edinburgh in 1837, he studied for a short while in Paris, and then joined his father at Rochester, holding the appointment of surgeon to the North Aylesford Union. In two or three years' time he left that neighbourhood, and having purchased the interest in a small practice in Chelsea, he settled in Sloane-street, where he remained for twenty years. He succeeded in establishing there a fairly good practice, which latterly would have become much more extensive had it not been for the occasional official work which he undertook. Whilst in Sloane-street he took a very active part in founding the Western Medical Society, of which he was the secretary and librarian, and afterwards president; he also held the appointment of surgeon to the Chelsea Dispensary. As a private practitioner he was much liked and respected by his professional brethren, and his departure from among them was greatly regretted. He was connected with the Epidemiological Society at its foundation, and in later years became its President. It was in connexion with this Society that he first became associated with that branch of the Public Health work with which his name has become so intimately associated. The first subject that engaged the attention of this Society was "Small-pox and Vaccination," a committee of its members being appointed to conduct inquiries connected therewith. This committee, having obtained from foreign governments the communication of most important statistical facts as to the decline of small-pox, reported, *inter alia*, their results to the Society, and soon afterwards this valuable report (specially the work of Dr. Seaton, honorary secretary to the committee), was ordered to be printed for presentation to both Houses of Parliament.[1] The Compulsory Vaccination Act of 1853 was mainly the outcome of this report. He contributed important papers about this time to the Transactions of the Society, especially a paper on the "Protective and Modifying Power of Vaccination." In 1858 Mr. Simon, who had then become Medical Officer to the Privy Council, and with whom Dr. Seaton had previously been in relation as medical officer to the General Board of Health, enlisted his services as an inspector in that department. For the first two years the work was only occasional; it then became continuous, and, as will be seen by reference to the periodical Reports, he was constantly engaged in inquiring into and reporting on the state of vaccination in the metropolis and various parts of the country. The result of these investigations, and those of his colleagues, went to show the great deficiencies in the arrangements for public vaccination, and to procure an amendment of the law for Compulsory Vaccination. During the next four years he was more unsparing of himself than ever; for not only did he carry on his arduous official duties as inspector, but all his leisure time was occupied with the subject that so much engrossed him. The article on "Vaccination" in Reynolds' System of Medicine appeared in 1865, and in 1868 he published his well-known Handbook of Vaccination, a work which cost him a large amount of labour. These writings, together with his Report on Animal Vaccination (1869), and that in the new Local Government Board series in 1874 on the recent small-pox epidemic with reference to vaccination, constituted his chief contributions to the literature of the subject. But these represented a part only of the important services rendered by him to the public in relation to vaccination. It was by his constant and earnest devotion to the details of administrative work that he was enabled to afford such material assistance in bringing about an improvement in the state of public vaccination which, judged by the results, is certainly most remarkable. For the accomplishment of this task he brought to bear qualities which of themselves greatly contributed to success—great power of organisation with rare tact and judgment combined with firmness, qualities which enabled him to overcome or conciliate much of the opposition with which he would otherwise have had to contend. Some idea may be gathered of the amount of attention he gave to the work of administration by the simple statement of the fact that after the Medical Department of the Privy Council was transferred to the Local Government Board all the public contracts were revised, every one of them (upwards of 3000) under his supervision, with an accuracy of detail which could not be surpassed.

Though chiefly known in connexion with his work on public vaccination, Dr. Seaton also paid considerable attention to other sanitary subjects. He was one of the representatives of Great Britain in the International Sanitary Conference held at Vienna in 1874, and his valuable report and memoranda on this subject are contained in the new series of the Local Government Board Reports.

In 1876 he succeeded Mr. John Simon, C.B., as medical officer to the Local Government Board, to which he had previously acted as assistant medical officer. In this capacity he had to deal constantly with questions of general sanitary service and administration, in which his sound, clear judgment proved of great value.

Dr. Seaton may be said to have enjoyed very good health until the last two or three years of his life. He was very regular and careful in his habits, seeming to delight in work of every kind, though at the same time he never neglected to take a healthy amount of bodily exercise. A little more than a year after he became medical officer to the Board his health began to fail. The work had, from various reasons,

[1] *Vide* Simon: Papers relating to the History and Practice of Vaccination, 1857.

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been most unusually trying to him, and of a nature that would probably have taxed the strength of a much younger man. It was then he suffered from an illness which, looked upon by the light of subsequent events, must be regarded as the first evidence of the disease which carried him off. He went on, however, with his work, and it was not until a year later that he yielded to persuasion, and consented to take medical advice. Sir William Jenner, whom he consulted, recommended rest and change for six months, and he had already made his arrangements for carrying this recommendation into effect, when he received news from India of the sudden death of his youngest and dearly-beloved son, who was killed by a fall from his horse on Christmas-day, just as he was entering upon a career of bright promise. This disaster made a profound impression on Dr. Seaton, but, notwithstanding the depressing circumstances, he adhered to his original intention of taking the latter and chief part of his leave abroad. On his return in June he appeared to be better, and declared himself to be so. But the improvement was only apparent, for in October, while on a short visit in Warwickshire, he was seized with an attack of right hemiplegia. As soon as he could be moved with safety, he was brought to the residence of his son-in-law at Notting-hill. Here he seemed to be making steady, though rather slow, improvement, and there was every appearance of his securing at least such an amount of recovery as would enable him to enjoy life for some time to come, when on Jan. 19th he was seized again, and died on the 21st instant. He was buried at Kensal-green, and a notable assemblage around the grave of men famous in the public-health service of the kingdom testified to the great honour and respect in which he had been held.

J. LOCKHART CLARKE, M.D., F.R.S.

THE medical profession, which in the past year had many losses from its ranks, has already in the present year to deplore the death of a member who shed a lustre on it, and who throughout the world of biological science was held in deserved esteem. Dr. Jacob Augustus Lockhart Clarke, who was born in 1817, died on January 25th, 1880.

His mother was left a widow, with a competency, when Lockhart was a boy, and removed to France, in order to give her children, of whom she had seven, educational advantages. On her return to England, in 1830, Lockhart, who up to this time had displayed no unusual ability, and was regarded by his family as lazy, began to show a desire for study, and, selecting the medical profession, to which his elder brother belonged, and which his grandfather had followed, commenced his studies at Guy's and St. Thomas's Hospitals. On obtaining the licence of the Apothecaries' Company, he commenced practice in Pimlico, living with his mother. Here, amidst the constant interruptions of his professional calling, he started and carried on the investigations into the anatomy and pathology of the nervous system which have made his name so universally known. His researches were characterised by patient and laborious study, and by extreme accuracy and care. So much is this the case, that his anatomical studies are accepted facts, and have been of great service in the elucidation of the physiology of the nervous system. Not only did he explore a territory then almost unknown, but he introduced a new method of preparing and examining tissues that has revolutionised histological research, and has been not less fruitful in the hands of others than in his own. His investigations were chiefly published in the Philosophical Transactions, and their value was so appreciated that he was elected a Fellow of the Royal Society, and received the Royal Medal of the Society in 1864. He published also valuable papers in French and in German. In 1867 he was made an Honorary Fellow of the King and Queen's College of Physicians, Ireland, in recognition of his scientific work. In 1869 he graduated at St. Andrews. Soon after this he took the Membership of the College of Physicians, London; left general for consulting practice, and was elected physician to the Hospital for Epilepsy and Paralysis, Regent's-park. He was a man single of purpose, of noble independence and honesty, wholly free from ambition, and wanting in that knowledge of the world necessary for making way in it. What measure of success he obtained in consulting practice it is difficult to gauge, but he will be remembered, not as the popular physician, but on account of his patient and laborious researches so fruitful to medical science. He was of a singularly retiring and reserved disposition, and hence few knew of his illness. He was seen by Mr. Henry Smith, by Dr. Hughlings-Jackson, and by Dr. Stephen Mackenzie, but fell a victim to pulmonary disease, to which there was a family tendency.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 22nd inst.:—

Butler, George Robert, Yarmouth, Nova Scotia.
Farmer, E. W. White, Boulogne-sur-Mer.
Gubbin, George Frederick, Brixton-road.
Harper, Charles John, Hadleigh, Suffolk.
Harris, F. W. H. Davie, Ivy-bridge, Devon.
Hatton, George Stokes, Newent, Gloucestershire.
Hawkins, F. D. Cæsar, Clapham.
Garrard, Jacob Henry, Southsea, Hants.
Peck, Edw. George, M.B. Cantab., Cambridge.
Powell, Henry Albert, University-street.
Winterbottom, Charles, Sloane-street, Chelsea.

The following gentlemen were admitted Members of the College on the 23rd inst.:—

Atkin, Charles, Sheffield.
Billiald, Richard Atherstone, Nottingham.
Bissill, Arthur Kent, L.S.A., Sleaford.
Buckell, Arthur Edward, Chichester.
Gilkes, Malim D'Oyley, L.S.A., Leominster.
Harries, Arthur John, Llanelly.
Henty, Sydney Haviland, Camden-road.
Knight, William, Sutton.
Mathews, S. R. Harvey, Bickley.
Palmer, John, Langford, Somerset.
Phelps, Philip, Weston-super-Mare.
Phillips, L. W. Kinglake, Brighton.
Sers, Clement Henry, Lewisham-road.
Smith, James Snowden, Salisbury.
Towlson, Harry Joseph, Wingfield, Derby.
Whitworth, William, St. Agnes, Cornwall.

Of the 133 candidates examined during the last week, 77 passed to the satisfaction of the Court and obtained their diplomas; 7 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 49 failed to reach the required standard, and were referred for six months' further professional study. Eleven candidates who had passed in Surgery at previous examinations, having subsequently obtained a medical degree or licence recognised by the College, were also admitted Members.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Jan. 22nd:—

Baines, Harold Athelstane, Saxon Villa, Lincoln.
Bissill, Arthur Kent, Sleaford, Lincolnshire.
Conolly, Paul Bennett, Somerset-terrace, Kilburn.
Chenai, Eduljer Sorabjee, Chandos Villa, Lorne-road, Brixton.
Hakim, Hormasji Merwanji, " " "
Karaujia, Merwanji Dhunjibhai, " " "
Kelawala, Manekshaw Jamshedji, Cromwell-road, Bayswater.

The following gentlemen on the same day passed the Primary Professional Examination:—

Arthur Orton, Queen's College, Birmingham; W. Noble Puddicombe, Guy's Hospital; Walter Trelliving Williams, London Hospital.

At the Preliminary Examination in Arts held at the Hall on Jan. 23rd and 24th, 100 candidates presented themselves, of whom the following passed and received certificates of proficiency in General Education:—

FIRST CLASS (in order of merit).—1st: C. H. Upham. 2nd: Mary Royce. 3rd: C. H. Conolly and Arthur Wright. 4th: A. F. Messeter, 5th: E. E. Batt, R. H. Castor, B. Rigby Johnston, T. G. MacLaren, and F. H. Mead.

SECOND CLASS (in alphabetical order).—H. W. Austin, Arthur Badcock, E. E. Barclay, R. S. Betts, A. H. Bird, E. J. Bower, Gilbert W. Brooks, J. P. Brooks, K. F. Brown-Constable, G. C. Buchanan, F. J. Calvert, J. A. Coles, E. P. Collett, R. Cordiner, H. A. W. Coryn, W. H. Crago, W. E. Eppstein, R. Fetherstonhaugh, E. Gumpert, Kathleen H. Graham, E. Gregson, H. Gurney, E. M. Hassard, W. Hook, T. Hurlbutt, H. Hutchinson, H. W. Husbands, C. H. Jackman, F. P. R. James, S. H. Johns, Osborne Johnson, David E. Jones, H. G. Jones, C. R. King, A. G. V. Leech, Wm. J. Lewis, H. E. M. Long, Montague Moore, R. Powell, J. P. Roughton, H. S. Saunders, J. B. Sutton, George Thorpe, A. H. Vlieland, J. Wilding, Charles Wiaken, H. P. Ziemann.

SIR WILLIAM MILLER, M.B., Knt., has been appointed to the Commission of the Peace for the Borough of Londonderry.

COPY AVAILABLE

THE salary of Dr. Carre, medical superintendent of the Castlebar Lunatic Asylum, has been increased by £50 yearly.

MR. JOHN VINALL, F.R.C.S. Eng., late Medical Officer for the No. 5 district of the Hackney Union, has obtained a superannuation allowance of £30 per annum.

A valuable timepiece, with handsome vases, have just been presented to Dr. Ashton, surgeon, of Disley, prior to his leaving the neighbourhood, by his patients of Furness Vale and Disley, in recognition of his skill and kindness.

STEEVENS' HOSPITAL MEDICAL SCHOOL, DUBLIN.—A report has lately been circulated to the effect that this medical school will shortly be amalgamated with another institution.

TOBACCO POISONING.—An inmate of the Glencree Reformatory, aged eighteen, died suddenly last week in consequence of having swallowed a portion of tobacco, which, it appears from the evidence given at the inquest held, he was in the habit of chewing.

THE Messrs. Bolitho, of Penzance, have presented to the managers of the West Cornwall Infirmary a donation of £1000, with the request that the principal and interest should not be expended in defraying the ordinary expenses of the institution, but be applied to the extension of the Infirmary, either by the addition of a new ward or by some permanent improvement of the existing buildings.

ON the evening of Wednesday, Jan. 21st, some of the past and present students of St. Mary's Hospital, to the number of about forty, met at the Pall-Mall Restaurant, on the occasion of a complimentary dinner to Mr. James R. Lane, who has for twenty-eight years filled the office of surgeon to the hospital. The chair was taken by Dr. Broadbent, who, after the usual loyal and patriotic toasts were disposed of, presented Mr. Lane with a handsome silver epergne and illuminated address, subscribed for by upwards of a hundred of Mr. Lane's pupils at the hospital, and, in an eulogistic address, alluded to Mr. Lane's long and valuable services to the hospital, his contributions to surgical literature, and his uniform kindness and courtesy to all with whom his arduous and multifarious duties brought him in contact. Mr. Lane replied in a long and appropriate speech.

Medical Appointments.

ALDRIDGE, R., M.D., has been appointed a Consulting Medical Officer to the Yeovil District Hospital, on resigning as Medical Officer.

ALLEN, A., M.D., C.M., has been appointed Medical Officer and Public Vaccinator for the Keelby District of the Caistor Union, Lincolnshire, vice Burnham, resigned.

BRYAN, F. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Inspector of Seamen for the Port and District of Littlehampton.

BUTLIN, H. T., F.R.C.S., has been appointed Assistant-Surgeon to St. Bartholomew's Hospital, vice Willett, appointed Surgeon.

CAMERON, H. C., M.D., F.F.P.S.G., has been appointed Surgeon to the Royal Lunatic Asylum, Gartnavel, Glasgow.

COATES, E., L.F.P.S.G., has been appointed Medical Officer to the Workhouse, Portumna Union, co. Galway, at £60 per annum, and £5 10s. per annum as Medical Officer of Health, vice S. Coates, M.D., deceased.

COCKRAN, C. H., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Caversham District of the Henley Union, vice Young, resigned.

COYLE, Mr. D., has been appointed Public Analyst for the Southern Division of the County of Derby, at £42 per annum and 10s. 6d. per analysis, when exceeding sixty in any one year, vice Goode, deceased.

CROWE, J. W., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Hartlepool District of the Hartlepool Union; also to the Hartlepool Union Workhouse, vice Moore, resigned.

DE LA HUNT, Dr. J. J., has been appointed Medical Officer, Public Vaccinator, &c., for the Lawrencetown Dispensary District of the Ballinasloe Union, co. Galway, at £112 per annum and fees, and £15 per annum as Medical Officer of Health, vice Brodie, resigned.

DREW, J., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Stirling, vice Heath, deceased.

DYER, T. B., M.D., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Superintendent of the Metropolitan Asylum District Asylum for Adult Imbeciles, Darenth, near Dartford.

GARLAND, E. C., L.R.C.P.Ed., M.R.C.S.E., has been appointed a Consulting Medical Officer to the Yeovil District Hospital, on resigning as Medical Officer.

GRAHAM, B. G., M.R.C.S.E., has been appointed Medical Officer to the Workhouse, Irvinestown Union, at £70 per annum; and Medical Officer, Public Vaccinator, &c., for the Irvinestown No. 1 Dispensary District, at £100 per annum and fees, and £15 per annum as Medical Officer of Health, vice Irvine, deceased.

GRUGGEN, W., L.K.Q.C.P.I., L.F.P.S.G., has been appointed Medical Officer and Public Vaccinator for the Silkstone District of the Penistone Union, Yorkshire, vice Rowley, resigned.

HAWKINS, W. R. T., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the No. 6 District of the Barton-Regis Union, Gloucestershire.

HAYDON, W. R., M.D., C.M., has been appointed Medical Officer to the Hearts of Oak Friendly Society new Medical Club, Tiverton, Devon.

JONES, D. J., M.D., has been appointed Junior Assistant Medical Officer to the Kent Lunatic Asylum, Barming-heath, vice Thurston, resigned.

KING, E. J. S., M.D., Ext. L.R.C.P.L., has been appointed Medical Officer of Health for the Dulverton Rural Sanitary District, Somersetshire, at £50 per annum, vice Blyth, whose appointment has expired.

MARSH, C. J., M.R.C.S.E., has been appointed an Honorary Medical Officer to the Yeovil District Hospital.

MEAGHER, Dr. E. P., has been appointed Medical Officer, Public Vaccinator, &c., for the Templemore Dispensary District of the Thurles Union, co. Tipperary, at £100 per annum and fees, and £10 per annum as Medical Officer of Health, vice O'Connell, deceased.

SLOAN, A., M.B., has been appointed Out-door Accoucheur (Northern District) to the Glasgow Maternity or Lying-in Hospital, vice Brock, appointed an Assistant Physician-Accoucheur.

SMITH, T. O., M.B., C.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Gweedore portion, Cross Roads (Falcaragh) Dispensary District, of the Dunfanaghy Union, co. Donegal, at £100 per annum and fees, and £10 per annum as Medical Officer of Health.

STAFF, G. T. A., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the No. 3 District of the Penzance Union, vice Hunt, resigned.

TAYLOR, W. C. E., L.R.C.P.Ed. & L.M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Scarborough Union Workhouse, vice Rablah, deceased.

TICEHURST, A. R., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Hastings and St. Leonard's Convalescent Home for Children, for the ensuing year.

WADE, A. L., M.D., has been appointed Senior Assistant Medical Officer to the Kent Lunatic Asylum, Barming-heath, vice Powell, appointed Superintendent of the Nottingham Borough Lunatic Asylum.

WOOD, R. E., M.B., C.M., has been appointed Resident Physician to the Royal Edinburgh Hospital for Sick Children, vice Turner, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BENTON.—On the 25th inst., at The Cottage, Bushey-park, the wife of Samuel Benton, Esq., M.R.C.S., of 2, Bennett-street, St. James's, of a son.

FENNINGS.—On the 25th inst., at Clarendon-road, Notting-hill, the wife of Allen Fennings, L.R.C.P.Ed., of a daughter.

GRANGER.—On the 24th inst., at Sutherland-terrace, Downhill, Glasgow, the wife of Dr. J. R. Granger, of a daughter.

HARDWICKE.—On the 25th inst., at Parkfield House, Sheffield, the wife of Herbert Junius Hardwicke, M.D., of a daughter.

NAISMITH.—On the 20th inst., at Alloway-place, Ayr, N.B., the wife of W. J. Naismith, M.D.Edin., of a daughter.

PLETTS.—On the 22nd inst., at Kent House, Ryde, Isle of Wight, the wife of J. Menham Pletts, M.D., of a son.

WALKER.—On the 22nd inst., at Parkhurst, Isle of Wight, the wife of George Edward Walker, L.R.C.P.L., of a daughter.

MARRIAGES.

STRATHY—GRANT.—On the 15th inst., at the Parish Church, Alford, Aberdeenshire, Frederic R. L. Strathy, M.D., to Mary, daughter of D. R. L. Grant, Esq.

URQUHART—REID.—On the 21st inst., at St. Luke's, Kepplestone, Aberdeen, by the Rev. J. Mitford Mitchell, B.A. Cantab., assisted by the Rev. Henry Cowan, B.D., Alexander Reid Urquhart, M.D., Physician-Superintendent, Murray's Royal Asylum, Perth, to Agnes, youngest daughter of George Reid.

DEATHS.

BEATH.—On the 18th ult., Andrew Beath, L.R.C.S.Ed., of Stirling.

BELL.—On the 15th inst., at Llanbryde, James Nicholas Bell, M.D., Surgeon-Major, Army Medical Department (on half-pay), aged 49.

BENSON.—On the 21st inst., at Fitzwilliam-square, Dublin, Charles Benson, M.D., aged 83.

GIBSON.—On the 21st inst., George Gibson, M.D., Surgeon, Royal Naval Hospital, Port Royal, Jamaica.

HALTON.—On the 25th inst., at Headfort-place, Kells, co. Meath, Richard Joseph Halton, L.K.Q.C.P.I., aged 49.

KEY.—On the 18th inst., at Edinburgh, Thos. Key, late Superintending Surgeon, Madras Army.

MORGAN.—On the 17th inst., at St. Giles-street, Norwich, Arthur Morris Foster Morgan, M.R.C.S.E., L.S.A.L.

NAYLOR.—On the 22nd inst., at Stockport, James Naylor, L.S.A.L., formerly of Halifax.

ROBBS.—On the 22nd inst., at Grantham, after a few days' illness, Charles Henry Denny Robbs, M.D., aged 47. The only intimation.

SEATON.—On the 21st inst., at Ladbroke-grove, Edward Cator Seaton, M.D., aged 64.

THOM.—On the 19th inst., at Brampton, Cumberland, Alexander Thom, L.R.C.P.Ed.

WILLIAMS.—On the 26th ult., at Thrapston, Hugh Williams, M.R.C.S.E., aged 88.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, Jan. 29th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 23	30·48	E.	37	36	..	40	29	....	Overcast
,, 24	30·47	N.E.	37	33	..	37	35	..	Overcast
,, 25	30·39	S.E.	32	..	..	35	29	..	Fine
,, 26	30·32	S.E.	27	..	..	34	23	..	Foggy
,, 27	30·26	S.E.	29	..	..	35	20	..	Foggy
,, 28	30·25	S.E.	24	..	..	29	20	..	Foggy
,, 29	30·24	W	23	..	..	27	20	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

SLIGHTLY INCONSISTENT.

IN a conspicuous part of the shop-window of a butter-seller in one of the best-known West-end streets there has appeared for months past a printed bill, headed "A Word to the Merciful. A petition to the Houses of Parliament against Vivisection lies for signature within." The position of this announcement is immediately below that of a very large consignment of pâtes de foie gras, and alongside of "Belgravian rolled ox-tongues." Does the worthy butterman know the kind of torture to which the Strasburg geese are subjected for lengthened periods in order to bring about the fatty condition of the liver, which forms the basis of these pies? Is he aware that the ox, whose tongue is so prized, is an animal which has been submitted to a terribly cruel operation without anæsthetics, and without a licence from the Government authorities? Or are we to take it that proceedings which are undertaken by men of science, with all the safeguards afforded by professional reputation and the aid of anæsthetics for the avoidance of sufferings, necessitate this appeal to the "merciful," the tickling of whose palates is of such immense consequence that any amount of cruelty to the lower animals may be indulged in with impunity?

Mr. H, Vigurs.—We cannot advise. Consult a practitioner.

ON ERGOT IN CONGESTIVE DYSMENORRHŒA.

To the Editor of THE LANCET.

SIR,—A year ago I was called to see an unmarried lady, aged twenty-eight, who was in great pain, and had been so for about four hours, with dysmenorrhœa. I learnt that for about twelve hours before the commencement of each period she suffered extreme pain, becoming worse just before the beginning of the flow. She would often lie down and roll about in the greatest agony. Her two unmarried sisters suffered in the same way and as much, and the same was the case with one married sister until her marriage. All three were strong, healthy-looking girls, though all were the subjects of that common affection of women, chronic constipation, the bowels often remaining for a week together without acting. I am not now going to speak of the radical treatment of these cases; but having been called in during a paroxysm of pain I had to endeavour, in the first place, to relieve it. I accordingly prescribed ergot in doses of half a drachm of the liquid extract every quarter of an hour. The pain began to diminish before the second dose had been taken, and after the third the flow had commenced, and the pain entirely gone. It may be objected that I am calling what was only *post hoc, propter hoc*; but this is not so, and for the following reasons:—On this occasion the young lady had been in pain only about four hours before treatment, so that the duration of pain was now only about five, instead of twelve, hours, as on previous occasions. Secondly, she and her sisters have ever since kept a bottle of medicine, according to prescription, in the house, and they have recourse to it on each occasion at the very earliest warning of the period, and they hardly suffer any pain. I am, of course, disposed to treat them radically—i. e., by prescribing for and giving instructions as to the bowels, to endeavour to do away with the necessity for specific treatment of the symptoms, but they are perfectly satisfied to have a remedy for these on each occasion.

Now, a rational system of therapeutics is far more satisfactory than an empiric one. I may, therefore, be excused if I draw attention to my theory of the action of the drug in these cases, my recourse to it in the first instance being founded on this theory.

Ergot is supposed to cause contraction of the muscles of organic life. I do not compare its action in cases of congestive dysmenorrhœa to that on the uterus at term. I suppose that here it acts not on the muscular fibres of the uterus so much as on those of its vessels; contraction of the uterine small arteries being the cause of relief from congestion, then, the congestion and general pressure being removed, the menstrual flow comes on.

Yours truly,

Ladbroke-grove, W., Jan. 1880. H. B. BLACKBURN.

AMALGAMATED FRIENDLY SOCIETIES AND MEDICAL INSTITUTES.

Mr. A. Wyer omits from his letter information on the very points on which it is wanted—viz., the rate of remuneration given to medical men in such amalgamated Societies as compared with that given in the most reasonable Friendly Societies, and as to the care taken to exclude persons whose means make it possible for them to pay proper fees to medical men. If he will deal with these points, we shall try to find room for a letter from him, though it is our custom to insert letters only from medical men. Nobody doubts that the members of such amalgamated medical institutes benefit themselves by arrangements which, it is alleged, are bad for the profession.

Dr. Rolleau.—The paper has been received, and is marked for insertion.

TOBACCO-SMOKING.

To the Editor of THE LANCET.

SIR,—There died recently in the Isle of Skye, N.B., a woman who had outlived a century by several years, and yet was said "never to have had the pipe out of her mouth." Some reader may be able to verify the facts; but, assuming them to be as stated, the inference seems warranted that tobacco-smoking is not a chronic poisoning, for it is against every probability that an individual continually subjected through a long period to the influence of a seriously hurtful agent should attain to an *extreme* old age. Statistics can throw no light on the matter; but one such instance outweighs much theoretical objection and even Richardson's physiological facts, for it is not to be supposed that these do not apply to the case of the old woman of Skye. Support is also given to our conclusion by the fact that the nations most addicted to smoking lead the van of civilisation. The fact seems to be that we require indulgences and dissipations—the stronger less, and the weaker more,—and it is good that these should be as varied and innocent as possible; while for a man whose energies are feeble to spend them on a silly asceticism is simply to render himself a churlish companion and a worthless citizen.

Tobacco-smoking, again, is not to be condemned because it becomes a habit. Habit is the inertia of the mind, and as all-important there as its analogue in the world of physics. To be a slave indeed is disgraceful; but to minds of a certain calibre it is simply a question of masters. An allied but positively injurious habit is inordinate newspaper-reading, which, cramming at every leisure moment with the elaborated product of other men's thinking, destroys the ability to think for ourselves. This habit (tobacco-smoking) counteracts by enabling us to do nothing gracefully, and doing nothing means setting the intellectual house in order—restoring the mental balance. Whatever be the subtle charm of the weed, it is at least powerful, and to recognise and attempt to analyse it would give more force to the arguments of opponents than sweeping assertions of uselessness addressed to those whose personal experience must be infinitely more potent in determining their opinions than any theoretical objections propounded by the uninitiated.

I am, Sir, yours truly,

London, Jan. 25th, 1880. W. M'L.

To the Editor of THE LANCET.

SIR,—I presume the insertion in THE LANCET of the late Professor Parkes' defence of smoking tobacco, "when tolerance has been established" (i. e., when the healthy action of the nerves has been damaged by the poison) is inserted to provoke replies.

I lived so long ago as to have been a supporter of the then custom of injecting tobacco-smoke in cases of strangulated hernia, till rather too many patients having died suddenly under the operation put an end to using the deadly poison.

An intimate smoking friend of my own so suffered from shaking palsy of his hands that the offer of £10,000 to fill his wineglass without spilling any would merely have caused his head to shake sadly. To attempt shaving himself would have been suicide. A few months ceasing to smoke the poison entirely cured his palsy.

Like other thoughtless folks, I used to smoke till I observed that, however impatiently hungry I was for food, a pipe for a time destroyed that natural healthy sensation—evidently from the poison paralysing the nerves placed by a wise God to warn me when my body required food. So, of course, on observing this, I dared not continue to gratify my vitiated palate by using the poison so injurious to my health. For a Christian shrinks from anything that he observes is likely to injure his health, and thus, merely for the sake of pleasing his self-vitiated palate, offend God. There are many degrees in the act of suicide. He has, moreover, to consider lest his actions may tempt others to imitate him in what is wrong. It may be that, "in moderation," he himself seems to suffer slightly from the poison; while his friend, imitating him, may forget the moderation limit, and become in truth a suicide. Just as with alcohol: seemingly a slow poison to some, a quicker poison to others—an unchristian drink for everyone in health; while tobacco is bad for everyone in health or in sickness, Christian or heathen.

Yours faithfully,

Jan. 1880. J. MACKENZIE, M.D., &c.

M.B. Lond., F.R.C.S. Eng.—Our correspondent does not do justice to the curriculum and examinations of the Scotch Universities. His main suggestion might, however, be put in a form which would not involve any injustice to these institutions, which are doing valuable work.

MEDICINE IN THE PROVINCE OF ARKHANGEL.

THE province of Arkhangel appears to be suffering from a dearth of medical practitioners. The province has an area of 750,000 square versts, and a population of 299,912. This population includes seventeen medical men only—one for every 47,000 inhabitants. Of these medical men, eight only have any public professional duties, two live in the capital of the province, and six in the rural districts.

Mr. J. S. Dunlop and *A Medical Salt.*—Application should be made to some of the large shipping agents and owners, also to the representative of the Queensland Government for emigration.

Virus will find the reply on page 115 of our issue of Jan. 17th.

THE DIAGNOSIS OF HEPATIC ABSCESS.

To the Editor of THE LANCET.

SIR,—I have just read in THE LANCET of October 4th, 1879, Mr. Boyd B. Joll's remarks on my report of the case of Hepatic Abscess, published in your journal of Aug. 23rd, and I am not surprised that he has failed to reconcile the notes with the diagnosis and remarks. Mr. Joll has apparently overlooked a very important part of the description of the previous history of the patient's illness. The chill on the night of July 13th was not followed by symptoms of pneumonia, but by pains in the right side and abdomen, which lasted several days, and recurred frequently until July 27th, when pain in the right side below the ribs became violent, and during the next few days was felt in front from the right nipple to below the ribs, and behind from the lower angle of the scapula downwards. The pneumonic symptoms first appeared on Aug. 1st, and at my first examination on Aug. 3rd there was hepatic enlargement upwards in front and behind. The right mammary line of dulness extended upwards to the nipple, and the right dorsal line close to lower angle of scapula, and the lower half of the normal right mammary and median lines of hepatic dulness was resonant. There was also at base of right lung, as evidenced by weakened vesicular murmur and faint crepitation, a slight degree of pneumonia. Such were the physical signs, which were regarded by Dr. Henderson and myself as indicating the probable existence of an abscess of the right lobe of the liver, pointing through its convex surface, pressing on the base of the right lung, attended with peri-hepatitis, and a slight amount of pneumonia at base of lung. The collateral symptoms were pyrexia, cough, dyspnœa, and severe pain over the region of the liver.

Mr. Joll states that the above case appeared to him to be the exact counterpart of one described in THE LANCET Hospital Mirror of March 2nd, 1878, as empyema complicated with pneumonia. I have read Mr. Joll's notes of the latter case, and fail to perceive the slightest resemblance between them. In Dr. Gowers' patient the symptoms and physical signs of a large effusion in the cavity of the pleura were complete, and the patient was in imminent danger of perishing from suffocation. In my patient there were no symptoms or physical signs of fluid in the pleura, but merely a very limited degree of pleuro-pneumonia, which produced very little disturbance in respiration, and never caused any anxiety whatever. There was certainly no need to have the aspirator "driven" into the cavity of the pleura, nor was it ever there; but there was urgent necessity to explore the liver, and fortunate it was for the patient that the abscess was discovered and aspirated. With reference to the two apparently contradictory statements in my remarks, which "startled and amused" Mr. Joll, what I meant to convey was, that "suddenly on the 27th July the symptoms of hepatic suppuration first showed themselves." In all probability deep-seated suppuration was going on for some time previously; but it was only when the peri-hepatitis and pneumonic symptoms appeared, with acute pain and enlargement of liver, that the diagnosis became almost certain. Mr. Joll states that he has not been fortunate enough to see a case of acute tropical abscess of liver. I have met with a great many cases during the last sixteen years both in hospital and private practice, and I regret to say many were fatal. Fortunately antiseptic surgery has come to our aid, and is already diminishing the mortality from this disease. During the last four months I have operated antiseptically on two cases of acute tropical abscess of liver (one in hospital, the other in private practice), and both patients made excellent recoveries. At the present time I know of three more cases which quite recently have been similarly operated on in Shanghai, and two of the patients are already convalescent.

Yours faithfully,

Shanghai, Nov. 29th, 1879. JAMES JOHNSTON, M.D. Edin.

Senex.—The cost of a journey to Paris or Vienna depends upon the route taken. The minima are about 30s. to the former and £7 to the latter. The cost of living in either city depends upon the habits of the traveller. In simple lodgings the expense in Paris is about equal to that in London, and in Vienna (in the suburbs) rather less.

Dr. Robert Bell.—Soon.

Mr. C. Lowther Kemp.—It does not surprise us very much.

ORGANISM IN SPUTUM.

To the Editor of THE LANCET.

SIR,—In reply to the suggestion of Mr. H. Owen in respect of the organism observed by me, permit me to observe that the great difference which existed between its size and that of the cell described by Quain alone sufficiently negatives such a view of its nature.

I am, Sir, yours truly,

Bristol, Jan. 20th, 1880. SAM. SMITH.

ROYAL COLLEGE OF SURGEONS OF ENGLAND: PROFESSIONAL EXAMINATIONS.

THE following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates at the pass examination for the diploma of Member of the College on the 16th inst., when they were required to answer at least four, including one of the first two, out of the six questions:—

1. Describe the several structures which must be divided in an amputation of the thumb and its metacarpal bone.
2. Describe the course, relations, and anastomoses of the deep epigastric artery.
3. What is a node? Give the anatomical characters of its various forms, and the treatment you would adopt in each case.
4. Describe the defects of vision which may exist, unconnected with disease. Explain their causes, and state how they should be remedied.
5. Mention the causes of perineal abscess, its symptoms, course, and treatment.
6. Mention the various injuries which produce—(1) lengthening, (2) shortening of the lower extremity.

On the succeeding day the following questions on the Principles and Practice of Medicine were submitted to those candidates who had not passed a recognised medical examination:—

1. What conditions give rise to fluid in the pleural cavity, of what kinds may it be, and what are the signs which indicate the presence of each kind? What treatment should be pursued in different circumstances?
2. What are the chief modes by which mechanical obstruction of the bowel is produced, the symptoms proper to, and the treatment to be adopted in each?
3. What are the uses and doses of the following drugs?—Salicylate of soda, acetate of ammonia, liquor arsenicalis, sulphate of potash, vinum antimoniale, infusion and tincture of digitalis, sulphate of zinc, liquor potassæ, subnitrate of bismuth, extract and tincture of stramonium, calomel, and hydrargyrum c. cretâ.

MEDICAL SERVICE IN BRITISH GUIANA.

To the Editor of THE LANCET.

SIR,—In your issue of Nov. 15th, p. 748, is a letter from "A Bengal Civil Surgeon," who seems to have forgotten that "Caparisons is odourus." In the interests of possible applicants for vacancies in the Medical Service of British Guiana, kindly permit me to overlook that Sketchly proverb, and make some statements that may prevent my juniors misreading the Government Blue-books. Your correspondent's Scotch friend, if a medico, must have been my senior. *Tempora mutantur.*

1. The districts should be calculated, not by mileage, but by number of hospitals and number of patients—i. e., on average, five hospitals and 4000 patients a year, the hospitals requiring alternate daily visits, often daily.

2. There is one surgeon-general, resident surgeon, &c., not in the same department, and giving no claim to promotion or transfer.

3. There are two districts at £500 a year: one has never been filled up; the other is at the Dutch extremity of the colony, and has only one neighbouring medical officer, who has to do all the work for half the pay—when a practitioner of foreign qualification cannot be got to live or die in the district.

4. On nomination, a candidate may expect to get £300 a year, and may expect to keep himself in Georgetown on that sum for, say, six months in every two years.

5. The British Guiana Medical Service has not been established for ten years, so there can be no man staying at a smaller station for twelve years; but there are some who can find their services so well appreciated as to see juniors at £900, themselves getting £700.

6. In British Guiana the pay is at 4*s.* 2*d.* the dollar. However, I believe the expenditure of one rupee in India would produce as much as one dollar produces in British Guiana.

7. Excepting in town districts, which are also healthy, private practice can seldom exceed £100 a year, and will not reach this amount if medical officers bow to the Court of Police, and take fifty cents for each private patient treated.

8. Bengal civil surgeons' table of districts and salaries, if placed in apposition with a table of the same when altered, as is now proposed by Government (*vide British Guiana Royal Gazette*, May 31st, 1879), will show that the Government intend to save £2900 in the medical salaries of the Immigration Department—e. g.: *Antal*, 4 at £1000, 8 at £900, 1 at £800, 5 at £700, 6 at £600, 2 at £500. *Future*, 0 at £1000, 5 at £900, 8 at £800, 1 at £700, 5 at £600, 4 at £500. This means that 26 medical officers receiving £21,000 are to be replaced by 23 men receiving £18,100.

Intending candidates for the British Guiana Medical Service should understand that in British Guiana they will have to pay twice as much for manufactured goods and produce, and four times as much for labour, as in England.

Superannuation is allowed to all officers of more than ten years' service at the rate of 1-50th of the salary they are drawing when retiring for each year of service. Leave, on half-pay, *may* be obtained once in five years if the medical officer can afford it and the Government can find a substitute for him.

Believing that these notes may be of importance to the present candidates for colonial service, I remain, Sir, your obedient servant,

Dec. 25th, 1879. A BRITISH GUIANA SURGEON.

Pulsum qui nervit ferat.—There is no uniformity. There is a growing inclination on the part of lay committees and governors to adopt the recommendations of the Medical Committee. Perhaps the best arrangement is a composite election committee, composed of representatives of the general body of governors, of the lay committee, and of the honorary medical and surgical staff.

J. L. S.—The instruments can be tested at Kew.

Mr. J. L. Nixon.—There is no reason to doubt the fact.

AMPUTATION AT THE ANKLE-JOINT.

To the Editor of THE LANCET.

SIR,—Owing to my residence in this remote colony, and consequent delay in receiving my LANCETS, I am thus tardy in forwarding a few remarks, called forth by a letter on the above subject in your issue of November 1st, 1879. I trust you will consider them worthy of insertion in your invaluable journal.

Mr. Maxwell Adams, being impressed by the frequency of sloughing in the heel-flap in Syme's operation, suggests a modification, which a knowledge of the following facts may render less needed.

Authorities recommend the incision to slope from the malleoli *towards* the heel, and Erichsen even goes further, and advises that the incision be carried over the point of the heal. Gross, of Philadelphia, is the only surgeon of eminence, I believe, who teaches that the incision should be nearly vertical to the malleoli.

As the success of the operation depends on the vitality of the inferior flap, it is obvious that that incision which least interferes with its blood-supply ought to be preferred. My friend Dr. John A. Wyeth, of New York, finding that in his dissections of this region the arterial distribution as given by Gray, Wilson, and Leidy in their text, and Quain in his diagrams, did not correspond with what he found, resolved to investigate the matter thoroughly, and to this end made 80 consecutive dissections. The results were published in the *American Journal of Medical Sciences*, April, 1876, and have since been reprinted, together with similar investigations on other parts, in book form "Essays in Surgical Anatomy and Surgery," Wood and Co., N.Y.) "In 72 out of the 80 cases," says Wyeth, "the posterior tibial bifurcated into its plantar branches on a line between the lower border of the inner malleolus and the middle or centre of the heel's convexity. In 4 of the remaining cases the separation occurred one-fourth of an inch, and in the other 4 cases one-half inch below this line. Any variations in the point of division *tend in all cases* towards the line of incision in amputation in this region. In 38 out of 80 dissections (almost half) there was not a single calcanean artery derived from the posterior tibial. So it must follow that any line of incision that approximates the terminal bifurcation of this vessel will, in a great many cases, endanger the blood-supply, and consequently the success of the operation. In 80 cases, 51 calcanean branches were derived above the bifurcation. In 80 cases, 18 were derived opposite the point. Out of 80 cases the number of calcanean branches derived from the external plantar artery and distributed to the posterior or calcanean flap, safely within the line of Gross's incision, was 221, or more than three times the number, and carrying, without the least exaggeration, twice the volume of blood of those derived opposite to and above the bifurcation."

Erichsen's objection to an incision well forward is the formation of a cup-shaped cavity, in which pus &c. may accumulate; but this ought not to be raised in these days of antiseptic surgery.

Feeling assured that if the anatomy of the heel, as correctly described by Wyeth, were generally known, we would have less sloughing flaps and consequent secondary amputations, I have taken the liberty of thus using the work of another.—Your obedient servant,

J. H. ARTON, M.D. Coll. P. & S., New York.

Bermuda, January 7th, 1880.

Mr. E. F. Coste.—We cannot name an institution. Our correspondent's medical adviser will direct inquiries into the proper channel.

Dr. Heywood Smith.—Shortly.

Mr. W. Berry.—We shall be glad to receive the "notes."

PREGNANCY AFTER OVARIOTOMY.

To the Editor of THE LANCET.

SIR,—Perhaps you may be able to find room for the following brief report of a case, which seems worthy of record.

Mrs. R—— was delivered of her third child on Sept. 17th, 1876. On examining the abdomen after delivery, a tumour was discovered apparently in connexion with the womb, and evidently ovarian. Subsequently she attended Peterborough Infirmary as an out-patient until March, 1879, when the tumour, which was rapidly increasing, and had attained a large size, was removed by Dr. T. J. Walker under the antiseptic treatment. She recovered without one bad symptom, and left the infirmary five weeks after, quite well. During the summer she noticed her abdomen enlarging, and, fearing a return of the tumour, again went to the infirmary, where she was pronounced pregnant. Catamenia had not appeared since the operation, the last time being in the last week of February. Ovariotomy had been performed on March 20th, and she left the infirmary on April 26th, 1879. She was delivered of a female child, full term, on January 24th, 1880. When I saw her the child had been born an hour. The placenta was loose in the vagina, and there had been very little loss. On Jan. 26th she was progressing favourably.

Yours truly,

Whittlesea, Jan. 27th, 1880. C. F. HARDING, M.D.

TYPHOID FEVER AND ASCARIS LUMBRICOIDES IN CHILDREN.

To the Editor of THE LANCET.

SIR,—On the evening of November 11th I received an urgent message from a distance to visit a child. On arriving there with as much dispatch as possible, I found a well-developed little girl, five years of age, in a dying, comatose state. On making inquiries I learned from the friends that an older child in the same house was just convalescent from typhoid fever, and that great care had been taken to disinfect and remove the excreta &c. to a distance. The child to whom I was called had always enjoyed good health, never suffering from restlessness, convulsions, or anything to lead one to suspect intestinal irritation until four days before, since which she had been rather ailing, her bowels very slightly relaxed, and twice during this period had vomited a large round worm, all this time being able to run about with other children, when suddenly she became sleepy and heavy, and was put to bed. This continued when I saw her three hours afterwards in the alarming condition above mentioned, her state not admitting of a very prolonged examination. The face was calm, not pinched or indicative of pain; eyes wide open, the pupils dilated equally, turned upwards, and responding but little to either light or touch; the skin bathed in a clammy perspiration; tongue covered with a brown fur; pulse 120 per minute, weak and easily compressible. The abdomen on inspection presented no spots, was distended and tympanitic. On pressure, especially in the right iliac region, I detected gurgling, and a faint expression of pain passing over the child's features. Profuse diarrhœa commenced simultaneously with the head symptoms, the stools very loose, of a pea-soupy character, with no appearance of hæmorrhage. I should mention the legs were not flexed. A stimulant slightly revived the little patient, but only temporarily, for she gradually sank, expiring painlessly five hours after my visit.

I calculate this case to have progressed to about the end of the first week in a decidedly latent or "ambulatory" form. This period is too early to account for the severity of the final symptoms as the result of perforation, but rather the presence of worms, which, with the abnormal condition of bowel, must have caused intense irritation along the alimentary tract, and yet no tendency, as we might have expected, to spasmodic twitchings or convulsion, but the reverse—insensibility and coma. The presence of worms ought to be taken into account in treating young cases among the poorer classes, and, being such an important item in the prognosis, should be investigated and treated at an early period of the disease.

Yours faithfully,

Bicester, Oxon., Jan. 1880. NELSON S. FOSTER, M.B.

Mr. E. Taylor (foreman of jury, Stockwith, Gainsborough), and *A Lover of Justice*, are referred to our annotation on the subject.

E. H.—See Erichsen's work on "Hospitalism."

SEWAGE DISPOSAL.

To the Editor of THE LANCET.

SIR,—I have long been of opinion that all the efforts hitherto made to treat with this abominable nuisance, sewage, and turn it to good account and perhaps profit, as it ought to be, have been at the wrong end, as it were; if it is not absolutely wasted and worse than wasted, discharged into rivers or the sea, so as to be got rid of in the easiest and quickest way, it is collected in vast tanks, and then, after having had all its most valuable material washed away, what remains has to be treated with chemicals, and rendered too expensive to distribute to the land for agricultural purposes; or irrigation is resorted to, and this barbarism naturally fosters the spread of certain diseases. I propose to begin at the other end of the sewers, the house end. Intercept the flow into the sewers; let nothing but water get into the sewers, not even the soluble salts, the urates and phosphates, not even the free ammonia; do not waste an atom; keep the rivers clean, and let the agriculturists have the whole of the sewer matter throughout the length and breadth of the land, and banish sewer-bred diseases for ever. The enclosed printed paper will explain how I propose to do this. The gases must be absorbed by the charcoal or conveyed away, and the earth will take up all the soluble organic matter and salts. The solid organic matter in the top vessel, the galvanised iron one, can be very readily absorbed by the land where it is to be utilised as manure; it should be placed in layers three or four inches thick, and covered with earth to the depth of five or six inches for three months. It will then be found transformed into a fine dark-brown or black loam. This is not by a chemical action; it is a vital organic action in the soil, an eating and digesting by invisible minute living organisms.

The other day an engineer, who was summoned from London to Chester, told the authorities at the Chester County Asylum the only thing they could do was to join on to the Chester sewers at an expense of £6000 (they end in the Dee). The justices said it would cost £12,000. I have offered them my scheme, free of all patent rights or royalties, to put it in practice in the cheapest way they can; with land all round them the cost of carriage will be *nil*. I also offer the free right to every hospital and every charitable institution to get these earth-filters set up for themselves in the cheapest way they can, compatible with efficiency, irrespective of my patent. The Underground Sub-railway was disallowed in the patent by the Attorney-General. He declared this to be "matter for another patent," which might be taken up by a Company in connexion with mine.

Yours truly,

Edinburgh, Jan. 12th, 1880. GEORGE BARNARD.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayrer, London; Dr. Barnes, London; Mr. Savory, London; Dr. H. Tibbits, London; Mr. Tyson, Folkestone; Mr. Sheleview, Glentranmoss; Dr. Blake, Great Yarmouth; Mrs. Bedingfield; Mr. Simpson, Pontefract; Dr. Kelly, Felling-on-Tyne; Mr. Jeffreys, Chesterfield; Mr. Murphy, London; Dr. R. E. Thompson; Dr. Flinn, Kennington; Mr. Roland, Richmond; Dr. Boileau, Overdale; Dr. Arton, Bermuda; Mr. Beard, Bessbrook; Miss Corbould, Liverpool; Mr. Kemp, London; Dr. Symes, Halifax; Mr. M'Lean, London; Dr. Hewer, London; Dr. Salisbury, Illinois, U.S.A.; Dr. Wyer, Grantham; Mr. H. Smith, London; Dr. Dickinson, Jersey City, U.S.A.; Dr. Budd, Exeter; Mr. Biggs, Bath; Mr. Leihy; Mr. Coste, Islington; Mr. Lucas, India; Mr. R. Owen; Dr. Sinclair, Dundee; Mr. Orton, Kensington; Mr. Sutton, Sittingbourne; Messrs. Burroughs and Co., London; Dr. Voubin, Nantes; Mr. Husban; Mr. Blackett, London; Dr. Hill, Oldham; Mr. Dolan, Halifax; Mr. Fleming, London; Dr. Mackenzie, London; Dr. Pavy, London; Mr. J. F. Clarke, Somerset, Cape Colony; Mr. Cullimore, London; Dr. Brabazon, Bath; Mr. Warren; Mr. Jones; Mr. Dunlop, Blandford; Mr. Berry, Wigan; Mr. Tallack, London; Mr. Gawith; Mr. Smith, Bristol; Mr. Unsworth, Liverpool; Dr. Bell, Glasgow; Messrs. R. and J. Beck, London; Mr. J. L. Smith, London; Dr. Ormerod, London; Mr. Vigurs, London; Mr. J. H. Walters, Reading; Mr. Elliott, Cardiff; Miss Henley, Rugby; Mr. Accacio da Gama, Bombay; Dr. Harding, Whittlesea; Dr. Ashton, Besley; Mr. Parker, Norwich; Mr. Sarjeant; Messrs. Garbutt and Co., Gateshead; Mr. Rahu, Ipswich; Messrs. Richardson and Co., Leicester; Mr. Gattan, London; Mr. Cecly, Aylesbury; Mr. Browne, Liverpool; Mr. Butlin, London; Dr. Johnstone, Danville, Kentucky; Mr. Coward, Huddersfield; Mr. Lewis, Edinburgh; Captain Sibbald, Georgina, Canada; Mr. Olden, St. John's, New Brunswick; Messrs. Hutchinson and Co., London; Messrs. Evans and Co., Wrexham; Mr. Binks, Wakefield; Dr. Tibbets, Warwick; Mr. Kelsall, Ashton-under-Lyne; Messrs. Smith and Son, Dublin; Dr. J. Williams, London; Dr. Lambart, Liverpool; Mr. Crowe, Hartlepool; An Occasional Correspondent; W. M. L.; M. A. D.; Virus, Preston; A Lover of Justice; C.; Hope; British Guiana; L.R.C.P. Lond.; Y.; Guianese; A Medical Salt; M.B. Lond., F.R.C.S.; S. P.; B.; J. P.; Gamma; T. S. M.; B. S.; M.R.C.S.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Sturges, London; Mr. Buckby, Rugby; Mr. Storington, Pulborough; Mr. Harrison, Liverpool; Dr. Robertson, Glasgow; Dr. More, Rothwell; Mr. Masters, Thrapston; Dr. Blomfield, Norwich; Dr. Pletts, Ryde; Dr. Bowes, Elham; Messrs. Roberts and Co., Festiniog; Mr. Badger, Burntisland; Dr. GreatRex; Mr. Deeping, Leicester; Dr. A. B. Squire, London; Dr. Aitken, Woolstone; Dr. Kennedy, Dublin; Mr. M'Bean, Newcastle-on-Tyne; Mr. Jones, Conway; Messrs. Jolly and Sons, Norwich; Mr. Claydon, Bury St. Edmunds; Dr. Hardwicke, Sheffield; Mr. Cartwright, Brookfield; Mr. Westmoreland, Cheetham; Mr. Heslop, Church Stretton; Mr. Elliott, Carlisle; Mr. Ernst, London; Dr. Naismith, Air; Mr. Stuart, Wigan; Mr. Masters, Grantham; Dr. Wallace, Cleckeaton; Mr. M'Millan, Penistone; Mr. Ambrose, Church Gresley; Mr. Poole, Rusholme; Mr. Herring, Torquay; Mr. Woolley, Derby; Dr. Gill, Stratford; Dr. Davies, Maesteg; Dr. Walker, Cheltenham; Mr. Filtington, Elton; Mr. Thornton, London; M. O. P.; L. E. L., Brighton; A. D., Litchfield; E. P., Brockley; N., Buckden; Medicus, Glasgow; Alpha, Earthlingborough; Medicus, Newcross; W. R. P., Moreton-in-Marsh; M.R.C.S.; Zero; L.R.C.P., Salford; L. M., Birmingham; F. L. S., Great Yarmouth; Meta, Cannock; Surgeon, Newcross; W. S.; E. K., Bayswater; A.; Medicus, Carlisle; M.R.C.S., London; L. A. C.; R. N., Plymouth; F.R.C.S., Hornly; W. F. B., Brodribb; Medicus, Birmingham; Omega, Stoke-on-Trent.

Derbyshire Courier, Dover and County Chronicle, Derbyshire Times, Carlisle Express, Gardeners' Magazine, Westmorland Gazette, Dorset County Chronicle, Bridlington Gazette, &c., have been received.

NOTICE.

THE LANCET is now Enlarged to EIGHTY PAGES, giving additional space for the Scientific Papers of our Contributors. A first issue will be made each week at Seven o'clock on Friday morning, *for the Wholesale Houses only*, to facilitate the delivery in country districts soon after the arrival of the early trains. The Journal is also CUT AT THE EDGES. Another new feature is an INDEX to ADVERTISEMENTS, and their classification as far as possible, with NAMES of ADVERTISERS. (*See p. 2 of Advertisements.*)

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Medical Diary for the ensuing Week.

Monday, Feb. 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Lettsomian Lectures: Mr. W. F. Teevan, "On Stone in the Bladder."

Tuesday, Feb. 3.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Schäfer, "On the Physiology of Muscle."
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Casts illustrating Joint Disease in Locomotor Ataxia; Cases of Locomotor Ataxia, with Osseous and Articular Lesions (living specimens); Diseased Bone; Congenital Occlusion of the Duodenum; Gangrene of the Colon; Tumours from Abdomen; Drawings of Cancer; Drawings of Skin Diseases: Psoriasis and Acute Pemphigus; Epithelioma of Pharynx; Congenital Syphilis of the Larynx; Ento-laryngeal Epithelioma; Secondary Tumour after Removal of Breast; Epithelioma of Penis; Melanosis of Finger; Optic Neuritis; Diseases of Supra-renal Capsules; Miliary Tubercle of Bladder.

Wednesday, Feb. 4.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
EPIDEMIOLOGICAL SOCIETY (University College). — 8 P.M. Dr. Squire will exhibit Micro-photographs, by Dr. Sternberg, of the Blood in Yellow Fever.—Dr. Joseph Ewart, "On Enteric Fever in India, with some Observations on its probable Etiology in that country."
OBSTETRICAL SOCIETY OF LONDON. — 8 P.M. Specimens; New Instruments, by Dr. Heywood Smith; Moles and Fibroid Tumour of Vagina, by Dr. Herman. — Annual Meeting; Election of Officers; Changes in Bye-laws; President's Address.

Thursday, Feb. 5.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
ROYAL INSTITUTION. — 3 P.M. Professor Dewar, "On recent Chemical Progress."
HARVEIAN SOCIETY. — 8½ P.M. Mr. Osman Vincent "On Congenital Talipes in the Adult." — Mr. Walter Pye, "On the present Position of the Operation of Nerve-stretching."

Friday, Feb. 6.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M
ROYAL INSTITUTION. — 8 P.M. Evening Meeting.—9 P.M. Dr. Huggins, "On the Photographic Spectra of Stars."

Saturday, Feb. 7.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Pauer, "On Handel."

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